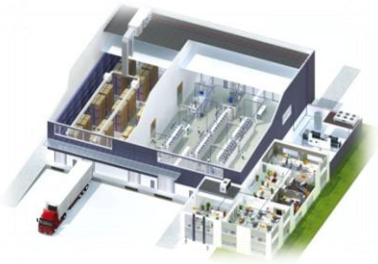
HVAC EMEA Solutions Guide

Office

Industry



Hotel

Commercial centre

Air Conditioning | Heating | Air Treatment | Industrial | System & Controls

Air-Cooled Chillers | Water-Cooled Chillers | Condensing Units

Cooling Capacity (kW)

5 10 25 50 100 150 300 450 600 750 900 1050 1200 1350 1500 1650

30AWH
DC-Rotary

30RB / 30RBY
(Scroll)

30RBS / 30RBSY
AQUASNAP (Scroll)

30RB AQUASNAP Puron (Scroll)

30XAS
AQUAFORCE
(Screw)

30XA AQUAFORCE (Screw)

Air-Cooled Chillers | Water-Cooled Chillers | Condensing Units

Cooling Capacity (kW)

25 50 100 150 300 450 600 750 900 1050 1200 1350 1500 1650 1800 1950

30WG (Scroll)

30RW /RWA (Scroll)

30HXC GLOBAL CHILLER (Screw)

30XW / XWP AQUAFORCE (Screw)

30XW-V AQUAFORCE (Screw +VFD)

23XRV (Screw +VFD)

Air Conditioning | Heating | Air Treatment | Industrial | System & Controls

Air-Cooled Chillers | Water-Cooled Chillers | Condensing Units

Cooling Capacity (kW)

0 5 15 30 45 60 75 90 105 120 135 150 165

38RBS 039 -160 (Scroll)

Air to Water Heat Pumps | Water to Water Heat Pumps

Capacity (kW)

5 10 25 50 100 150 300 450 600

Split 80 / 38AW DC-Rotary

30AWH DC-Rotary

61AF

61AF (Scroll)

Heating Only

30RQ / 30RQY (Scroll)

30RQS / 30RQSY AQUASNAP (Scroll)

30RQ AQUASNAP Puron (Scroll)

80HMA Comfort Module (Option)

Air to Water Heat Pumps | Water to Water Heat Pumps

Cooling Capacity (kW)

25 50 100 150 300 450 600 750 900 1050 1200 1350 1500 1650 1800 1950

61 WG (Scroll)

30RW + Opt 150 AQUASNAP (Scroll)

30HXC + Opt 150 GLOBAL CHILLER (Screw)

30XWH / XWHP AQUAFORCE (Screw)

30XWHV AQUAFORCE (Screw)

Air flow (m3/h)

500 *2 000* *8 000* *32 000* *128 000*

39SQ _ (1 000 - 30 000 m3/h)

Standard units

39SQC / R / P _(1 000 -18 000 m3/h)

Standard units with energy recovery & control system

39HQ _(1 000 -110 000 m3/h)

Modular units

0,14 *0,56* *2,24* *8,96* *35,8* *Air flow (m3/s)*

Total Cooling Capacity (kW)

0 1 2 3 4 5 6 7 8 9 10 11 12 13

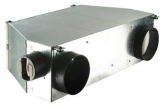

42N Concealed 10/40Pa (AC/LEC)


42N Console (AC/LEC)


42GW Cassette (AC/LEC)


42EM Ducted 30/90 Pa (AC/LEC)


42DW Ducted 50/120Pa (AC)


42BJ Corridor 100/300Pa (LEC)


42GM Centralized 100/300Pa (LEC)


42GR Centralized 100/300Pa (LEC)

All Carrier TFCU are Eurovent Certified

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

Air Handling Units | Fan Coils Units | Packaged Rooftop units

Cooling only | Reversible

Cooling Capacity (kW)

20 40 60 80 100 120 140

50UA - Cooling
+ Electric or Hot Water Heating option

48UA - Cooling
+ Gas Heating

ERM – Energy Recovery Module (Option)

Air Handling Units | Fan Coils Units | Packaged Rooftop units

Cooling only | Reversible

Cooling Capacity (kW)

20 40 60 80 100 120 140

50UH - Reversible Heat Pump
+ Electric or Hot Water Heating option

48UH - Reversible Heat Pump
+ Gas Heating

ERM – Energy Recovery Module (Option)

Cooling Capacity (kW)

1000 2000 3000 4000 5000 6000

19XR Hermetic Centrifugal Liquid Chillers

19XRV Hermetic Centrifugal Liquid Chillers

Absorption Chillers | Water-Cooled Chillers

Cooling Capacity (kW)

500 *1000* *2000* *3000* *4000* *5000*

16 TJ series Steam-Fired Absorption Chiller

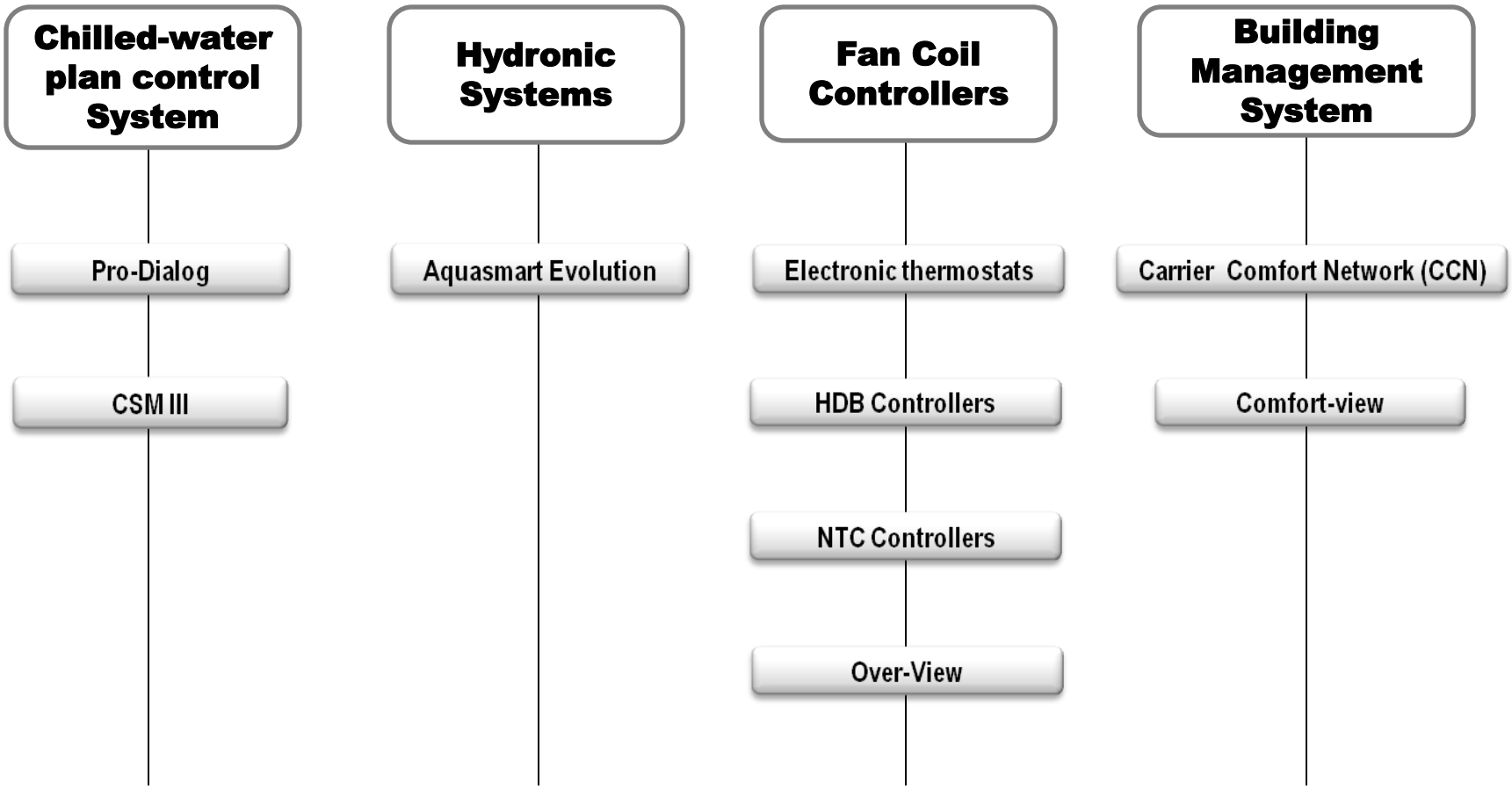
16 LJ series Hot Water-fired Absorption Chiller

Single-effect

16 DJ series Direct-Fired Absorption Chiller/Heaters

16 NK series Steam-Fired Absorption Chiller

Double-effect



30AWH Series Air to Water Heat Pump with Scroll Compressor(s)

5 sizes – 3 to 16 kW

INVERTER Technology

AQUASNAP PLUS Reversible

Puron the environmentally sound refrigerant

MAIN FEATURES

- R410A Refrigerant
- DC Inverter twin-rotary compressor
- Water Plates evaporator
- Variable speed fans control
- Variable Water Flow (optional)
- Compact and small foot print unit

SOUND

- Sound Power 64 – 68 dB(A)

EFFICIENCY

- Average EER > 2,9 ESEER = 4,4
- Eurovent certified

COMMUNICATION CAPABILITIES

- LonTalk
- Modbus
- BaCnet

DIMENSIONS

- Length (mm): 350
- Width (mm): 908
- Height (mm): 821 - 1363

MAIN OPTIONS

- Integrated hydronic module
- Variable Water Flow
- Additional outdoor sensor
- Remote controler

Remote controller 33AW-RC1

Literature

30RB Series Air Cooled Chillers with Scroll Compressor(s)

4 sizes – 17 to 33 kW

AQUASNAP with PURON® refrigerant

Puron the environmentally sound refrigerant

MAIN FEATURES

- R410A Refrigerant
- Cu/Alu coils
- Water Plates evaporator
- Axial “Flying Bird” fans
- Variable Water Flow (optional)

SOUND

- Sound Power 72 – 78 dB(A)
- Low sound level / super low sound operation

EFFICIENCY

- Average EER > 3,15 ESEER = 3,6
- Eurovent certified

COMMUNICATION CAPABILITIES

- LonTalk
- Modbus
- BaCnet

DIMENSIONS

- Length (mm): 522 - 824
- Width (mm): 1002 – 1136
- Height (mm): 1580 - 1790

MAIN OPTIONS

- Low ambient temperature down to -10°C
- Low sound level operation
- Integrated hydronic module
- Hydronic module antifreeze protection
- Condenser coil treatments
- Smooth or screwed customer connections
- 30RBY Ducted Version up to 160-200Pa

30RB

30RBY

Literature

30RBS Series Air Cooled Chillers with Scroll Compressor(s)

11 sizes – 40 to 160 kW

AQUASNAP with PURON® refrigerant

Puron the environmentally sound refrigerant

MAIN FEATURES

- R410A Refrigerant
- Cu/Alu coils
- Electronic expansion valve
- Water Plates evaporator
- Axial “Flying Bird” fans
- Variable Water Flow (optional)

SOUND

- Sound Power 80 – 90 dB(A)
- Low sound level / super low sound operation

EFFICIENCY

- Average EER > 2,9 ESEER up to 4
- Eurovent certified

COMMUNICATION CAPABILITIES

- LonTalk
- Modbus
- BaCnet

DIMENSIONS

- Length (mm): 2071
- Width (mm): 1081 - 2278
- Height (mm): 1329

MAIN OPTIONS

- Low ambient temperature down to -20°C
- Low sound level operation
- Integrated hydronic module (6 versions)
- Hydronic module antifreeze protection
- Condenser coil treatments
- Soft starter (up to 80kW)
- Smooth or screwed customer connections
- Ducted Version up to 160-200Pa
- Partial Heat Recovery (Coming soon)
- 30RBSY Ducted Version up to 160-200Pa

30RBS

30RBSY

Literature

30RB Series Air Cooled Chillers with Scroll Compressor(s)

15 sizes – 163 to 760 kW

AQUASNAP with PURON refrigerant

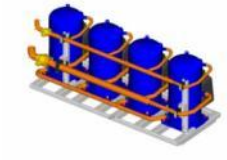
Puron the environmentally sound refrigerant

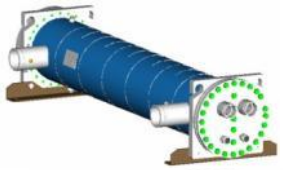
MAIN FEATURES

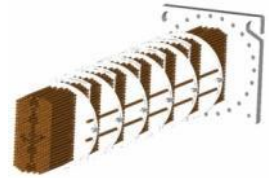
- R410A Refrigerant
- Alu/Alu coils
- DX evaporator
- Axial “Flying Bird” fans

SOUND

- Sound Power 84 – 94 dB(A)
- Low sound level / super low sound operation







EFFICIENCY

- EER up to 3 ESEER up to 4,1
- Eurovent certified

COMMUNICATION CAPABILITIES

- LonTalk
- Modbus
- BaCnet
- Energy Management Module EMM (easy connection to building managment system)

DIMENSIONS

- Length (mm): 2410 – 7186
- Width (mm): 2253
- Height (mm): 2297

MAIN OPTIONS

- Condenser coil treatments
- LWT down to -10°C / High static fan
- Grilles & side panels / Gateways
- Low ambient temperature down to -20°C
- Integrated hydronic module (4 versions)
- Hydronic module antifreeze protection
- Soft starter (up to 500kW)
- **Total Heat Recovery**
- **Partial Heat Recovery**
- **Direct Expansion Free Cooling**
- Ducted option 12 up to 160-200Pa

Literature

30XAS Series Air Cooled Chillers with Screw Compressor(s)

5 sizes – 235 to 482 kW

AQUAFORCE

HFC-134a

MAIN FEATURES

- R134a Refrigerant
- Alu/Alu coils
- Economizer with EXV on all the range
- Flooded evaporator
- Axial “Flying Bird” fans

SOUND

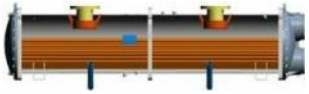
- Sound Power 94 – 98 dB(A)
- Low sound level & super low sound versions available

EFFICIENCY

- Standard & High Efficiency range
- EER up to 3,2 ESEER up to 4
- Eurovent certified

COMMUNICATION CAPABILITIES

- LonTalk
- Modbus
- BaCnet
- Energy Management Module EMM (easy connection to building managment system)

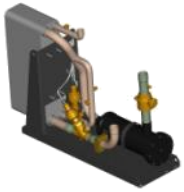


DIMENSIONS

- Length (mm): 2410 – 4798
- Width (mm): 2253
- Height (mm): 2297

MAIN OPTIONS

- Condenser coil treatments
- LWT down to -12°C / High static fan
- Grilles & side panels / Gateways
- Low ambient temperature down to -20°C
- High ambient operation up to 55°C
- Integrated hydronic module
- Hydronic module antifreeze protection
- Touch screen interface
- **Total Heat Recovery**



Literature

30XA Series Air Cooled Chillers with Screw Compressor(s)

20 sizes – 252 to 1700kW

AQUAFORCE

HFC-134a

MAIN FEATURES

- R134a Refrigerant
- Alu/Alu coils
- Economizer with EXV on all the range
- Flooded evaporator
- Axial “Flying Bird” fans

SOUND

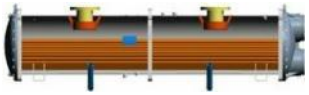
- Sound Power 89 – 101 dB(A)
- Low sound level & super low sound versions available

EFFICIENCY

- Standard & High Efficiency range
- EER up to 3.2 ESEER up to 4.2
- Eurovent certified , class A

COMMUNICATION CAPABILITIES

- LonTalk
- Modbus
- BaCnet
- Energy Management Module EMM (easy connection to building managment system)

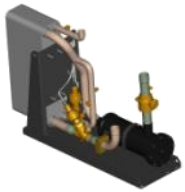


DIMENSIONS

- Length (mm): 3604 – (9574+4798)
- Width (mm): 2253
- Height (mm): 2297

MAIN OPTIONS

- Condenser coil treatments
- LWT down to -12°C / High static fan
- Grilles & side panels / Gateways
- Low ambient temperature down to -20°C
- High ambient operation up to 55°C
- Integrated hydronic module (4 versions)
- Hydronic module antifreeze protection
- Touch screen interface
- **Total Heat Recovery**
- **Direct Expansion Free Cooling**



Literature

30WG Series Water Cooled Chillers with Scroll Compressor(s)

11 sizes – 24 to 95 kW

AQUASNAP

Puron
the environmentally sound refrigerant

MAIN FEATURES

- 11 sizes with scroll compressors
- R410A refrigerant
- Plates exchangers
- Designed for cooling to LWT -12°C (option)
- Compact with small footprint

SOUND

- Sound Power 67 – 73 dB(A)
- Low sound level (-3dB(A) option available

EFFICIENCY

- EER up to 4,8 classe B
- ESEER up to 5,4
- Eurovent certified

COMMUNICATION CAPABILITIES

- LonTalk
- Modbus
- BaCnet
- Remote control option

DIMENSIONS

- Length (mm): 1044 – 1477
- Width (mm): 600 - 8805
- Height (mm): 901

MAIN OPTIONS

- LWT down to -12°C
- Gateways
- Soft starter
- Low/High pressure single-pump hydronic module.
- Remote user interface
- Unit stackable for operation.
- Customer water connections at the top of the unit.
- Twinning (master/slave operation)
- **Variable flow pump**

Literature

30RW- Series Water Cooled Chillers with Scroll Compressor(s)

10 sizes – 110 to 300 kW

AQUASNAP

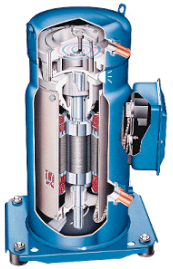
HFC-407C

MAIN FEATURES

- 10 sizes with scroll compressors
- R407c refrigerant
- Plates exchangers
- Designed for cooling to LWT -10°C (option)
- 19 sizes condenserless 30RWA 20-300 kW

SOUND

- Sound Power 94 – 104 dB(A)



EFFICIENCY

- EER up to 4,5 ESEER up to 5,4
- Eurovent certified

COMMUNICATION CAPABILITIES

- LonTalk
- Modbus
- BaCnet
- Energy Management Module EMM (easy connection to building managment system)

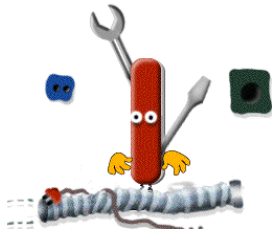
DIMENSIONS

- Length (mm): 2004 – 2950
- Width (mm): 895 - 922
- Height (mm): 1750 to 1993

MAIN OPTIONS

- LWT down to -10°C
- Gateways
- **Heat machine (not reversible)**
- Soft starter
- Hydronic modules with single or twin pumps
- Gateways
- **Variable flow condenser pump.**

Literature



HEATING Unit – Option 150

Control on water leaving condenser temperature.

30HXC Series Water Cooled Chillers with Screw Compressor(s)

17 sizes – 286 to 1300 kW Global Chiller

MAIN FEATURES

- R134a Refrigerant
- Flooded evaporator
- Compactness
- Dual independent refrigerant circuits

EFFICIENCY

- EER up to 5 ESEER up to 5,6
- Eurovent certified

DIMENSIONS

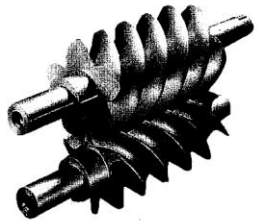
- Length (mm): 2558 – 4533
- Width (mm): 980 - 1015
- Height (mm): 1800 to 2112

SOUND

- Sound Power 94 – 104 dB(A)

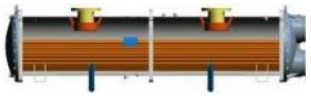
COMMUNICATION CAPABILITIES

- LonTalk
- Modbus
- BaCnet
- Energy Management Module EMM (easy connection to building managment system)



MAIN OPTIONS

- LWT down to -10°C
- Gateways
- Exchangers with one pass less.
- **High condensing water living temp up to 63°C**
- Exchangers for 21 bar water side operation.
- Reverse exchangers water boxes facilities
- Pumps electrical power/control facilities
- Service valve set
- **Sea water condenser applications**



HEATING Unit – Option 150

Control on water leaving condenser temperature.

Literature

30XW Series Water Cooled Chillers with Screw Compressor(s)

31 sizes – 275 to 1765 kW

AQUAFORCE

HFC-134a

MAIN FEATURES

- R134a Refrigerant
- Flooded evaporator
- Compactness

SOUND

- Sound Power 95 – 102 dB(A)
- Low sound level (-3dBA)

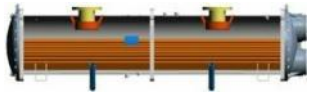
& super low sound (-20dBA) versions available

EFFICIENCY

- 20 sizes standard efficiency range
- 11 sizes High Efficiency range 30XW-P
- EER up to 5,6 ESEER up to 6,8
- Eurovent certified , class A

COMMUNICATION CAPABILITIES

- LonTalk
- Modbus
- BaCnet
- Energy Management Module EMM (easy connection to building managment system)

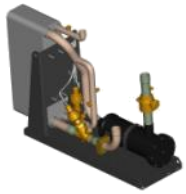


DIMENSIONS

- Length (mm): 2742 – 4872
- Width (mm): 936 – 1683 (side by side units)
- Height (mm): 1693 to 2100

MAIN OPTIONS

- LWT down to -12°C
- Gateways
- Exchangers with one pass less.
- **High condensing water living temp up to 63°C**
- Exchangers for 21 bar water side operation.
- Reverse exchangers water boxes facilities
- Touch screen interface
- Pumps electrical power/control facilities
- Service valve set



HEATING Unit 30XWH range

Control on water leaving condenser temperature.

Literature

30XW-V Series Water Cooled Chillers with Variable-Speed Screw Compressor(s)

9 sizes – 580 to 1700kW

MAIN FEATURES

- R134a Refrigerant
- Flooded evaporator
- Inverter-driven screw compressors
- Compactness
- Units optimised for cooling tower applications

SOUND

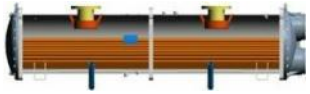
- Sound Power 99 – 102 dB(A)
- Low sound option available

EFFICIENCY

- 9 sizes High Efficiency range
- EER up to 5,6 ESEER up to 8
- Eurovent certified , class A

COMMUNICATION CAPABILITIES

- LonTalk
- Modbus
- BaCnet
- Energy Management Module EMM (easy connection to building managment system)



DIMENSIONS

- Length (mm): 2742 – 4872
- Width (mm): 936 – 1683 (side by side units)
- Height (mm): 1693 to 2100

MAIN OPTIONS

• Low noise option
• EMC EN61800-3-C2 compliance, for residential applications
• Exchangers with one pass less.
• Exchangers for 21 bar water side operation.
• Reverse exchangers water boxes facilities
• Service valve set

Literature

HEATING Unit 30XWHV range

Control on water leaving condenser temperature.

23XRV Series Water Cooled Chillers with Variable-Speed Screw Compressor(s)

1055 to 1934 kW

Evergreen™

HFC-134a

MAIN FEATURES

- R134a Refrigerant
- Flooded evaporator
- Inverter-driven screw compressors
- Tri-rotor, positive displacement screw compressor
- Low inrush current
- Operation of up to 0.99 power factor

SOUND

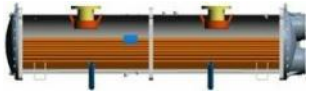
- Sound Power 99 – 102 dB(A)
- Low sound option available

EFFICIENCY

- High Efficiency range
- EER up to 6, ESEER up to 9

COMMUNICATION CAPABILITIES

- LonTalk
- Modbus
- BaCnet

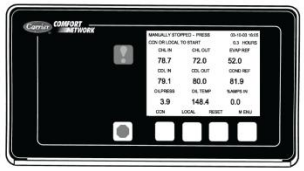


DIMENSIONS

- Length (mm): 4172 – 5042
- Width (mm): 1930 – 2127
- Height (mm): 2200 -- 2305

MAIN OPTIONS

• One, 2, or 3 pass cooler or condenser waterside construction
•Service valve set



Literature

61WG Series Water to Water Heat Pumps with Scroll Compressor(s)

11 sizes – 30 to 116 kW

AQUASNAP Heating

Puron the environmentally sound refrigerant

MAIN FEATURES

- 11 sizes with scroll compressors
- R410A refrigerant
- Designed for heating with +65°C as highest LWT
- Heat / cool change over with -5°C as lowest LWT(option)
- Compact with small footprint

SOUND

- Sound Power 67 – 73 dB(A)
- Low sound level (-3dB(A) option available

EFFICIENCY

- Cop up to 5,5
- Eurovent certified

COMMUNICATION CAPABILITIES

- LonTalk
- Modbus
- BaCnet
- Remote control option
- Heating system manager

DIMENSIONS

- Length (mm): 1044 – 1477
- Width (mm): 600 - 8805
- Height (mm): 901

MAIN OPTIONS

- LWT down to -5°C (ground source application)
- Gateways
- Soft starter
- Low/High pressure single-pump hydronic module.
- Remote user interface
- Unit stackable for operation.
- Customer water connections at the top of the unit.
- Twinning (master/slave operation)
- **Variable flow pump**

Literature

38AW / 80AW Air to Water Split System Heat Pump

8 sizes – 5 to 11,5 kW

MAIN FEATURES

- R410A Refrigerant
- DC Inverter twin-rotary compressor
- Variable speed fans control
- Pre-set or customised selection of the appropriate climate curve for stable output capacity to match the heat load.
- Output to link and integrate the unit with existing heat sources offers a dual-energy approach.
- Able to control two independent comfort zones.
- Leaving water temperature up to 60°C for radiator and domestic hot water applications.
- Heating mode available from -20°C to +30°C

DIMENSIONS (outdoor units)

- Length (mm): 320
- Width (mm): 900
- Height (mm): 690 - 1363

SOUND

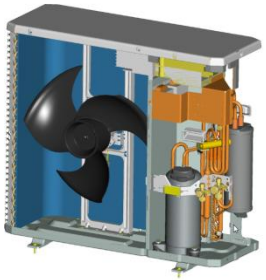
- Sound Power 64 – 70 dB(A) Outoor units
- Sound Power 40 Intoor unit

EFFICIENCY

- EER up to 4 - Cop up to 4,2 (CHF)
- ESEER up to 4
- Eurovent certified

MAIN OPTIONS

- Additional user interface
- Communication kit
- Domestic hot water Tank , one or two coils – storage 200/300 liters.
- Dual Zone Kit
- CDU rubber vibration isolators
- Additional outdoor sensor
- Piping kit to install domestic hot water valve and acturator inside unit.



Remote controller 33AW-RC1

38AW

80AW

Literature

30AWH Series Air to Water Heat Pump with Scroll Compressor(s)

5 sizes – 4 to 15 kW

INVERTER Technology

AQUASNAP PLUS Reversible

Puron the environmentally sound refrigerant

MAIN FEATURES

- R410A Refrigerant
- DC Inverter twin-rotary compressor
- Water Plates exchanger
- Variable speed fans control
- Variable Water Flow (optional)
- Compact and small foot print unit

SOUND

- Sound Power 64 – 68 dB(A)

EFFICIENCY

- EER up to 4 - Cop up to 4,2 (CHF)
- ESEER up to 4,5
- Eurovent certified

COMMUNICATION CAPABILITIES

- LonTalk
- Modbus
- BaCnet

DIMENSIONS

- Length (mm): 350
- Width (mm): 908
- Height (mm): 821 - 1363

MAIN OPTIONS

- Integrated hydronic module
- Variable Water Flow
- Additional outdoor sensor
- Remote controler
- **Additional confort module 80HMA range ….**

Literature

Remote controller 33AW-RC1


30RQ Series Air to Water Heat Pump with Scroll Compressor(s)

4 sizes – 17 to 33 kW

AQUASNAP Heating

Puron the environmentally sound refrigerant

MAIN FEATURES

- R410A Refrigerant
- Cu/Alu coils
- Water Plates exchanger
- Axial “Flying Bird” fans
- Variable Water Flow (optional)

SOUND

- Sound Power 72 – 78 dB(A)
- Low sound level / super low sound operation

EFFICIENCY

- EER up to 3,2 - Cop up to 3,8 (CHF)
- ESEER up to 3,9
- Eurovent certified

COMMUNICATION CAPABILITIES

- LonTalk
- Modbus
- BaCnet

DIMENSIONS

- Length (mm): 522 - 824
- Width (mm): 1002 – 1136
- Height (mm): 1580 - 1790

MAIN OPTIONS

- Low ambient temperature down to -15°C
- Low sound level operation
- Integrated hydronic module
- Hydronic module antifreeze protection
- Air coil exchanger treatments
- Smooth or screwed customer connections
- 30RQY Ducted Version up to 160-200Pa
- **Additional confort module 80HMA range ……**

INFO

30RQ

30RQY

Literature

30RQS Series Air Cooled Chillers with Scroll Compressor(s)

12 sizes – 40 to 160 kW

AQUASNAP with PURON® refrigerant

Puron the environmentally sound refrigerant

MAIN FEATURES

- R410A Refrigerant
- Cu/Alu coils
- Electronic expansion valve
- Water Plates exchanger
- Axial “Flying Bird” fans
- Variable Water Flow (optional)

SOUND

- Sound Power 80 – 90 dB(A)
- Low sound level

EFFICIENCY

- EER up to 3,2 - Cop up to 3,8 (CHF)
- ESEER up to 3,9
- Eurovent certified

COMMUNICATION CAPABILITIES

- LonTalk
- Modbus
- BaCnet

DIMENSIONS

- Length (mm): 2071
- Width (mm): 1081 - 2278
- Height (mm): 1329

MAIN OPTIONS

- Low ambient temperature down to -10°C
- Low sound level operation
- Integrated hydronic module (6 versions)
- Hydronic module antifreeze protection
- Condenser coil treatments
- Soft starter (up to 80kW)
- Smooth or screwed customer connections
- Ducted Version up to 160-200Pa
- Partial Heat Recovery (Coming soon)
- **30RQSY Ducted Version up to 160-200Pa**

30RQS

30RQSY

Literature

30RQ Series Air to Water Heat Pump with Scroll Compressor(s)

11 sizes – 189 to 548 kW

AQUASNAP PLUS Reversible

Puron the environmentally sound refrigerant

MAIN FEATURES

- R410A Refrigerant
- Cu/Alu coils
- DX evaporator / copper multi-tubes exchanger
- Axial “Flying Bird” fans

SOUND

- Sound Power 89 – 91 dB(A)
- Low sound level operation

EFFICIENCY

- EER up to 2,9 - Cop up to 3,7 (CHF)
- ESEER up to 4
- Eurovent certified

COMMUNICATION CAPABILITIES

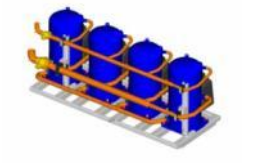
- LonTalk
- Modbus
- BaCnet
- Energy Management Module EMM (easy connection to building managment system)

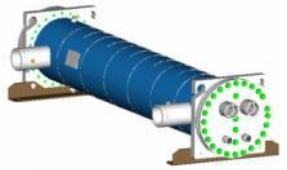
DIMENSIONS

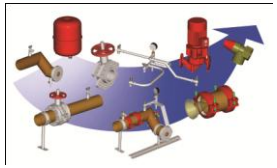
- Length (mm): 2410 – 4798
- Width (mm): 2253
- Height (mm): 2297

MAIN OPTIONS

- Air coil exchanger treatment
- Grilles & side panels / Gateways
- Low ambient temperature down to -10°C
- Integrated hydronic module (4 versions)
- Hydronic module antifreeze protection
- Soft starter
- **Partial Heat Recovery**







Literature

61AF Series Heat Pumps with Scroll Compressor(s)

2 sizes – 14 & 19 kW

AQUASNAP Heating

R.407C

MAIN FEATURES

- R407CA refrigerant
- Designed for heating with +65°C as highest LWT
- Heating capability down to -20°C OAT
- Scroll compressor with vapor injection
- Compact with small footprint
- Hydronic module in standard with multi-speed pump

SOUND

- Low sound level operation
- Low noise fans made of a composite material

Eco LABEL

EFFICIENCY

- COP above 4
- Eurovent certified
- Comply with the COP required by Ecolabel certification

COMMUNICATION CAPABILITIES

- LonTalk
- Modbus
- BaCnet

DIMENSIONS

- Length (mm): 1103 -1135
- Width (mm): 333 - 559
- Height (mm): 1278 -1579

MAIN OPTIONS

- Remote user interface
- Twinning – Lead lag kit
- **Additional confort module 80HMA range …..**

INFO

Literature

61AF Series Heat Pumps with Scroll Compressor(s)

7 sizes – 21 to 102 kW

AQUASNAP Heating

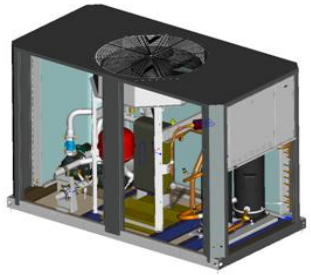
R.407C

MAIN FEATURES

- R407C refrigerant
- Designed for heating with +65°C as highest LWT
- Heating capability down to -20°C OAT
- Scroll compressor with vapor injection
- Compact with small footprint

SOUND

- Low sound level operation

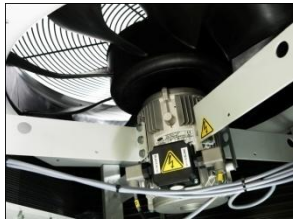


EFFICIENCY

- COP above 4
- Eurovent certified
- Comply with the COP required by Ecolabel certification

COMMUNICATION CAPABILITIES

- LonTalk
- Modbus
- BaCnet
- Heating system manager



DIMENSIONS

- Length (mm): 1327 - 2100
- Width (mm): 1114 - 2273
- Height (mm): 1330

MAIN OPTIONS

- Low sound / Super low sound level operation
- Gateways
- Soft starter
- Condenser with pre-painted fins
- Hydronic module.
- Remote user interface
- Twinning (master/slave operation)
- Heating system manager

Literature

Eco LABEL

38RBS Series Air Cooled Chillers with Scroll Compressor(s)

11 sizes – 40 to 151 kW

AQUASNAP with PURON® refrigerant

Puron the environmentally sound refrigerant

MAIN FEATURES

- R410A Refrigerant
- Cu/Alu coils
- Axial “Flying Bird” fans
- Refrigerant circuit includes all compoments for easy connection to AHU : filter dryer, liquid sight glass, 2 solenoid valves per circuit.

SOUND

- Sound Power 80 – 90 dB(A)
- Low sound level operation

EFFICIENCY

COMMUNICATION CAPABILITIES

- LonTalk
- Modbus
- BaCnet

DIMENSIONS

- Length (mm): 2071
- Width (mm): 1081 - 2278
- Height (mm): 1329

MAIN OPTIONS

- Low sound level operation
- Soft starter
- Low ambiant air temperature down to -20°C
- Room adjustable temperature sensor for capacity control
- Remote interface

Literature

39SQ Air Handling Units _ **1 000 to 30 000 m3/h**

Standard Units

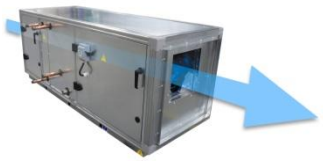
Airostar

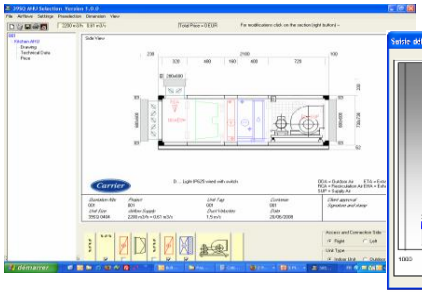
MAIN FEATURES

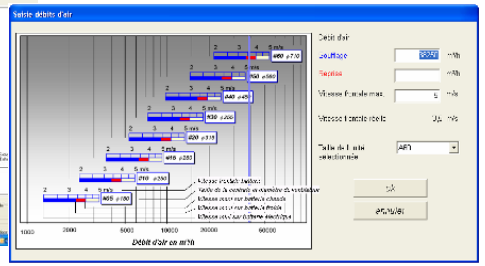
- Standardised AHU for tertiary & commercial applications.
- « Clean concept design » with smooth internal surfaces.
- 60mm double-skin construction for good termal insulation and low noise operaton.
- 3 basic configurations:
  - ✓ Exhaust unit.
  - ✓ Supply unit with a single fan.
  - ✓ Combined return & supply unit with 2 fans.
- 8 sizes from 1 000 to 30 00 m3/h.
- Galvanized steel frame & casing with large hingred acces doors.
- Casing in accordance with EN 1886 standard :
  - ✓ Air leakage class L2, thermal bridging class TB3, thermal transmission class T2.
- Double or single mixing section.
- Pre-heating hot water coil.
- G4 oo/ and F7 bag filters.
- Hot water coil or electric heatres.
- Chilled water coil.
- Belt-driven forward/ backward curced fans or direct-drive plug-in fans.

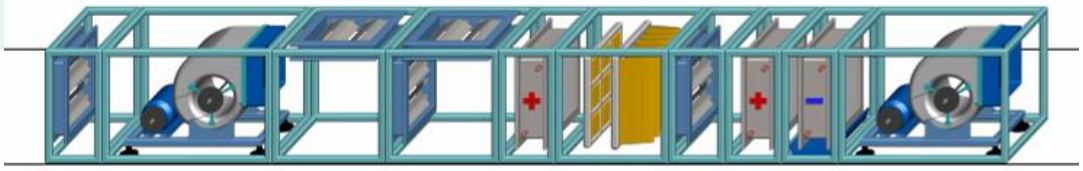
MAIN OPTIONS

- Outdoor installation.
- Inspection section between heating & colling coils.
- Reversed hot / chilled water coils.
- Differential pressure gauges.
- Differential pressure taps.
- Direct expansion refrigerant coil (25% fresh air)
- Lighting with switch.
- Door safety screen.
- Variable-speed drive with integrated disconnect switch..









Literature

39SQC /R/P Air Handling Units _**1 000 to 18 000 m3/h**

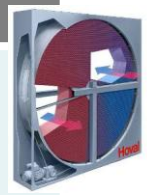
Plug & Play fresh air handling unit **with energy recovery & control system**

3 Versions in 9 sizes

39SQC

- Counter flow plate technology: 700- 3100 m³/h
- Very high efficiency up to 90%
- Aluminium plates
- Outside air by-pass (Free cooling, Capacity control, Heat exchanger defrost

39SQR



- Rotary technology: 1500-18000 m³/h
- Very high efficiency up to 86%
- Robust construction
- Variable speed drive

39SQP

- Cross flow plate technology: 700- 12500 m³/h
- Efficiency up to 60%
- Aluminium plates
- Outside air by-pass (Free cooling, Capacity control, Heat exchanger defrost

Literature

MAIN FEATURES

- All units delivered in one piece with : Pre-heating coil - Re heating coil - Cooling coil - Air dampers - Electrical box
- Large units splitable into two sections on site.
- Hygienic flat surface
- Excellent thermal properties 60mm, No thermal bridge
- Casing in accordance with EN 1886 standard :
  - ✓Air leakage class L1, thermal bridging class TB3, thermal transmission class T3.
- Plug fans with variable frequency drive.
- Main control system functions:
  - ✓Air flow control
  - ✓Temperature control
  - ✓Summer night free cooling control
  - ✓Alarm indication
  - ✓Easy local or remote access
  - ✓RS485 communication port
- Integrated WEB server
  - ✓Access from any computer
  - ✓No specific software required

MAIN OPTIONS

- Outdoor or indoor installation.
- Supply duct on bottom or top.
- Left or right hand service side.

39HQ Air Handling Units _ **1 000 to 110 000 m3/h**

Modular Units

AIROVISION

MAIN FEATURES

- Large selection of sizes and arrangements for many applications. (122 sizes)
- Modular construction easier to customise.
  - ✓ Rigid construction
  - ✓Panels with 60mm thick thermal insulation
- Galvanized steel frame treated with a weather resistant coating on both sides & casing with large hingred acces doors.
  - ✓ High corrosion resistance
- Casing in accordance with EN 1886 standard : Air leakage class L2, thermal bridging class TB2, thermal transmission class T2.
- 100% recyclabe compoments
- Low energy usage due to optimized compoment selection.
- Easy maintenance
  - ✓Various inspection options as generously sized opening access doors.
  - ✓Filters easly removable
  - ✓Drain pan in the outside air inlet section
  - ✓Long life fan and motor bearings.
- High Quality built-in compoments
- Eurovent certified

MAIN OPTIONS

- 100% stainless steel
- Direct drive fans
- All types of humidification systems, including infrasonic.
- Heat Recovery systems
- Wide selection of standard accessories.
- 316L stainless steel drain pan.
- Flat pack option for site assembly.

Literature

42N (F/P) Fan Coil

Concealed (AC/LEC)

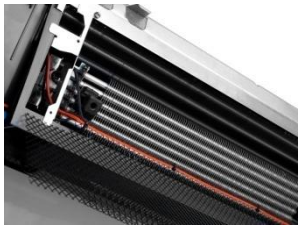
IDROFAN

PERFORMANCES

- Total Cooling capacities: 0.83 – 6.35 kW
- Sensible Cooling cap.: 0.70 – 5.10 kW
- Heating capacities: 1.14 – 9.50 kW
- Noise Rating NR: 15 – 54 dB(A)
- Energy class : AC class D/E ; EC class A

MAIN FEATURES

- ESP : 0 to 40Pa
- One of the more silent unit on the market
- LEC : Low Energy Consumption motors
- All-inclusive offer: minimizing installation cost with all options factory fitted and tested.



MAIN OPTIONS

- AC multi speed (5 speeds) or LEC motor variable speed 0-100%.
- PTC Electric Heaters self regulating based on the air flow, improving comfort and safety.
- Large water valve choice, customized solution ready to use: 2 way or 4 ways valves, 230V or 24V and On/Off or Modulating actuators.
- New anti-condensate shell insulation of valve body guarantees simplicity and safety.
- Wilde range of controllers: Thermostats (AC or EC), Master/Salve (HDB), Aquasmart (NTC)

Literature

42N (M/Z) Fan Coil

Console (AC/LEC)

IDROFAN

PERFORMANCES

- Total Cooling capacities: 0.83 – 6.35 kW
- Sensible Cooling cap.: 0.70 – 5.10 kW
- Heating capacities: 1.14 – 9.50 kW
- Noise Rating NR: 15 – 54 dB(A)
- Energy class : AC class D/E ; EC class A

MAIN FEATURES

- The benchmark on the market
- One of the more silent unit on the market
- LEC : Low Energy Consumption motors
- All-inclusive offer: minimizing installation cost with all options factory fitted and tested.

MAIN OPTIONS

- AC multi speed (5 speeds) or LEC motor variable speed 0-100%.
- Optimized air flow diffusion / easy integration of its aesthetic cabinet design
- PTC Electric Heaters self regulating based on the air flow, improving comfort and safety.
- Large water valve choice, customized solution ready to use: 2 way or 4 ways valves, 230V or 24V and On/Off or Modulating actuators.
- New anti-condensate shell insulation of valve body guarantees simplicity and safety.
- Wilde range of controllers: Thermostats (AC or EC), Master/Salve (HDB), Aquasmart (NTC)

Literature

42GW Fan Coil

Cassette (AC/LEC)

IDROFAN

PERFORMANCES

- Total Cooling capacities: 1.55 – 9.60 kW
- Sensible Cooling cap.: 1.30 – 7.35 kW
- Heating capacities: 2.20 – 13.00 kW
- Noise Rating NR: 27 – 56 dB(A)
- Energy class: AC classC/D, EC classA/B

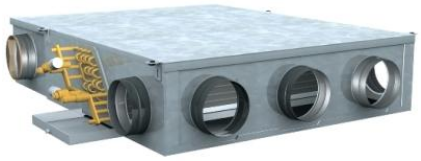
MAIN FEATURES

- The benchmark on the market
- One of the more silent unit on the market
- LEC : Low Energy Consumption motors
- All-inclusive offer: minimizing installation cost with all options factory fitted and tested.

MAIN OPTIONS

- AC multi speed (3 speeds) or LEC motor variable speed 0-100%.
- Electrical box & water valves accessible from same side
- Optimized 4 way air flow diffusion / easy integration of its aesthetic grill design
- Large water valve choice, customized solution ready to use: 2 way or 4 ways valves, 230V or 24V and On/Off or Modulating actuators.
- New anti-condensate shell insulation of valve body guarantees simplicity and safety.
- Wilde range of controllers: Thermostats (AC or EC), Master/Salve (HDB), Aquasmart (NTC)

Literature



42EM Fan Coil

Ducted Medium (AC/LEC)

IDROFAN

PERFORMANCES

- Total Cooling capacities: 0.80 – 7.85 kW
- Sensible Cooling cap.: 0.65 – 5.61 kW
- Heating capacities: 2.00 – 9.35 kW
- Noise Rating NR: 15 – 39 dB(A)
- Energy class: AC class C/D ; EC class A/B

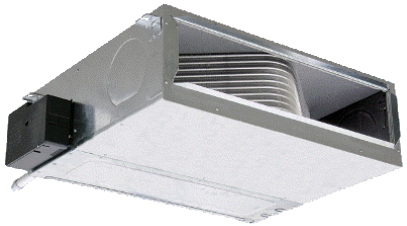
MAIN FEATURES

- ESP : 30 to 90Pa
- Best in class sound levels
- LEC : Low Energy Consumption motors
- All-inclusive offer: minimizing installation cost with all options factory fitted and tested.

MAIN OPTIONS

- AC multi speed (6 speeds) or LEC motor variable speed 0-100%
- Easy integration in false ceiling with compact units (high 250mm)
- Return & supply air plenum with multiple spigots choice (diameter 200mm)
- Large choice of factory fitted water valves / Electric heaters
- Wilde range of controllers: Thermostats (AC or EC), Master/Salve (HDB), Aquasmart (NTC)

Literature



42DW Fan Coil

Ducted Large (AC/LEC)

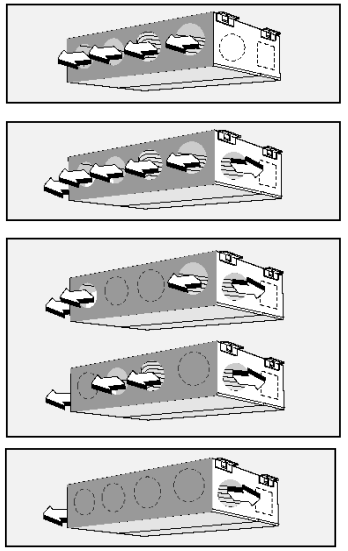
IDROFAN

PERFORMANCES

- Total Cooling capacities: 5.08 – 13.70 kW
- Sensible Cooling cap.: 4.00 – 10.60 kW
- Heating capacities: 6.74 – 19.60 kW
- Noise Rating NR: 38 – 63 dB(A)
- Energy class : AC class C/D

MAIN FEATURES

- ESP : 50 to 120Pa
- Best in class sound levels
- All-inclusive offer: minimizing installation cost with all options factory fitted and tested.



MAIN OPTIONS

- AC multi speed (4 speeds)
- Easy integration in false ceiling with compact units (high 285mm)
- Supply air plenum free or multiple spigots choice (diameter 200mm)
- Large choice of factory fitted water valves / Electric heaters
- Wilde range of controllers: Thermostats (AC or EC), Master/Salve (HDB), Aquasmart (NTC)

Literature

42BJ Fan Coil

Corridor (LEC)

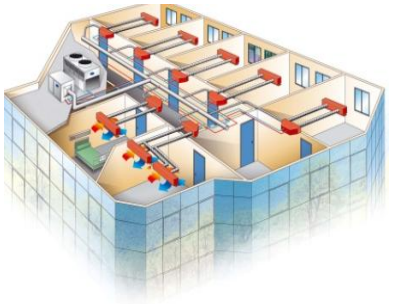
IDROFAN

PERFORMANCES

- Total Cooling capacities: 0.50 – 6.00 kW
- Sensible Cooling cap.: 0.50 – 12.0 kW
- Heating capacities: 0.51 – 6.80 kW
- Noise Rating NR: 25 – 46 dB(A)
- Energy class: AC class B/C ; EC class A/C

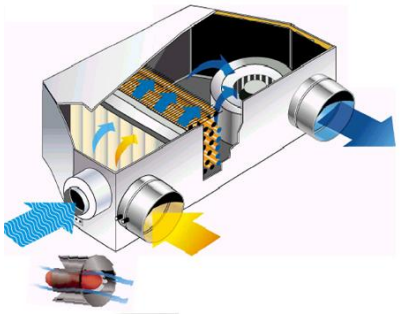
MAIN FEATURES

- ESP : 100 to 300Pa
- Best in class sound levels
- LEC : Low Energy Consumption motors
- All-inclusive offer: minimizing installation cost with all options factory fitted and tested.



MAIN OPTIONS

- LEC motor variable speed 0-100%
- Easy integration in centralized zone
- Large choice of factory fitted water valves / Electric heaters / Filters
- Wilde range of controllers: Thermostats (EC), Aquasmart (NTC)



Literature

42GM Fan Coil

Centralized (LEC)

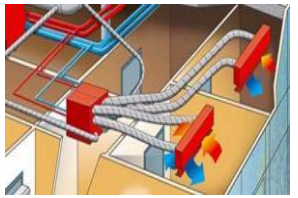
IDROFAN

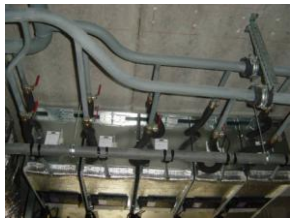
PERFORMANCES

- Total Cooling capacities: 0.50 – 2.80 kW
- Sensible Cooling cap.: 0.30 – 2.20kW
- Noise Rating NR: 20 – 45 dB(A)

MAIN FEATURES

- ESP : 100 to 300Pa
- Best in class sound levels
- LEC : Low Energy Consumption motors
- All-inclusive offer: minimizing installation cost with all options factory fitted and tested.

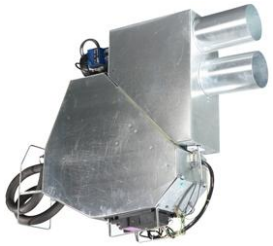




MAIN OPTIONS

- LEC motor variable speed 0-100%
- Easy integration in centralized zone
- Large choice of factory fitted water valves / Electric heaters
- Wilde range of controllers: Thermostats (EC), Aquasmart (NTC)

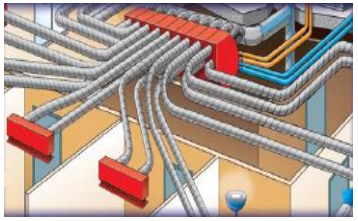
Literature



42GR Fan Coil

Centralized (LEC)

IDROFAN

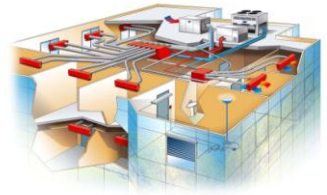


PERFORMANCES

- Total Cooling capacities: 1.00 – 3.35 kW
- Sensible Cooling cap.: 0.70 – 2.35 kW
- Heating capacities: 1.00 – 3.32 kW
- Noise Rating NR: 18 – 40 dB(A)

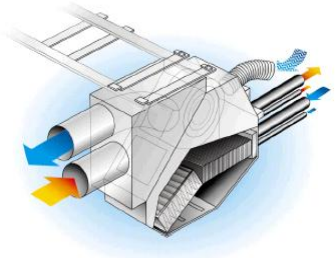
MAIN FEATURES

- ESP : 100 to 300Pa
- Best in class sound levels
- LEC : Low Energy Consumption motors
- All-inclusive offer: minimizing installation cost with all options factory fitted and tested.



MAIN OPTIONS

- LEC motor variable speed 0-100%
- Easy integration in centralized zone
- Large choice of factory fitted water valves / Electric heaters
- Wilde range of controllers: Thermostats (EC), Aquasmart (NTC)



Literature

19XR Series Water Cooled Hermetic Centrifugal Liquid Chiller

1000 to 5300 kW

Evergreen™

HFC-134a

MAIN FEATURES

- R134a Refrigerant
- Flooded evaporator
- Hermetic compressor motor
- CE Marking Chiller
- PED Heat exchanger certified
- Single Stage compressor
- Mix-match capability
- Microprocessor control with direct digital product integrated controls

COMMUNICATION CAPABILITIES

- LonTalk
- Modbus
- BaCnet

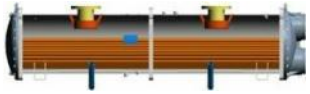
Montparnasse Tower Paris

EFFICIENCY

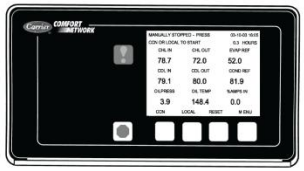
- High Efficiency range
- Average EER up to 6,8

MAIN OPTIONS

- One, 2, or 3 pass cooler or condenser waterside construction
- Service valve set
- IP54 protection for control box.
- High voltage motors available
- Tropicalisation
- Evaporator with 21 bar water-side pressure.
- Unit equipped with soft starter.
- Unit with star/delta starting.
- Sea-water/ Marine application
- Customer factory performance testing



Queen Mary II



Literature

19XRV Series Water Cooled Hermetic Centrifugal Liquid Chiller
With Variable-Speed Frequency Drive Compressor

Up to 4200 kW

Evergreen™

HFC-134a

MAIN FEATURES

- R134a Refrigerant
- Flooded evaporator
- Hermetic compressor motor
- CE Marking Chiller
- PED Heat exchanger certified
- Single Stage compressor with variable frequency drive.
- Mix-match capability
- Microprocessor control with direct digital product integrated controls

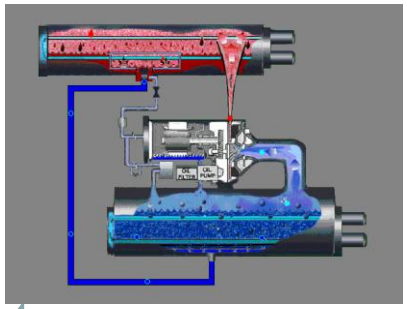
COMMUNICATION CAPABILITIES

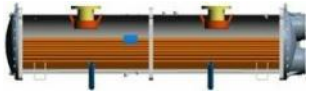
- LonTalk
- Modbus
- BaCnet

- Active rectifier VFD's No harmonics on network

EFFICIENCY

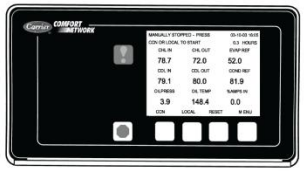
- High Efficiency range
- EER up to 5 ESEER up to 7,5





MAIN OPTIONS

- One, 2, or 3 pass cooler or condenser waterside construction
- Service valve set
- IP54 protection for control box.
- High voltage motors available
- Tropicalisation
- Evaporator with 21 bar water-side pressure.
- Sea-water/ Marine application
- Customer factory performance testing



Literature

Carrier Evergreen

19XRV VARIABLE SPEED

PRO-DIALOG

Chilled-Water Plan Control System

CONTROL FEATURES
(Pro-Dialog Plus/Pro-Dialog touch screen)

An advanced numeric control system. Combining complex intelligence with great operating simplicity

- Constantly monitors all machines parameters and safety devices and precisely manages the operation of compressors, fans and water pump.
- PID control algorithm anticipates load variations, guarantees leaving water temperature stability and prevents unnecessary compressor cycling.
- The long stroke electronic expansion valves (EXV) and PID superheat control, together with the head pressure control algorithm, improve energy efficiency at part load conditions and optimise unit operation.
- Automatic reset of the chilled-water temperature set point for optimised power consumption. Several capacity loading possibilities for improved start-up at low outdoor temperature and use of one refrigerant circuit as back-up.
- Provides preventive protection and enhanced unit reliability.
- Equalisation of operating time and number of compressor start-ups.
- Monitors all safety parameters. Fault history function and 80 fault code for immediate fault location. Parallel control of two units as standard.
- Extensive remote control capabilities allow integration into building management systems.
- RS-485 serial port for connection to the Carrier Comfort Network and any other monitoring system (through gateways).

Operator Interfaces

- The new backlighted LCD interface includes a manual control potentiometer to ensure legibility under any lighting conditions.
- The information is displayed clearly in English, French, German, Italian and Spanish (for other languages please consult Carrier).
- The Pro-Dialog+ navigation uses intuitive tree structure menus, similar to the Internet navigators.
- They are user-friendly and permit quick access to the principal opera-ting parameters: number of compressors operating, suction/discharge pressure, compressor operating hours, set point, air temperature, entering/leaving water temperature.

Energy management

- Seven-day internal time schedule clock: permits unit on/off control and operation at a second set point.
- Set point reset based on the outside air temperature or the return water temperature or on the water heat exchanger delta T.
- Master/slave control of two units operating in parallel with operating time equalisation and automatic changeover in case of a unit fault (accessory).
- Change-over based on the outside air temperature.

Pro-Dialog Plus interface

Pro-Dialog + interface

Pro-Dialog touch screen interface

Touch Pilot Operator interface

CSM III

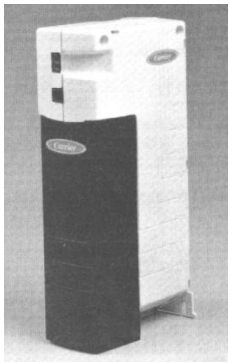
Chilled-Water plan control system

FEATURES

- A key component of the Carrier Comfort Network (CCN) Chillervisor System.
- Provides sophisticated multiple chiller control functions to optimise the efficiency of the Carrier chiller plant.
- Coordinates the operation of a chilled water system in which up to eight chillers feed a common chilled water loop.
- Consists of a module equipped with input and output points and specialised control and communication software.
- The CSM III operator interface is ComfortWORKS, Building Supervisor III or a Network Service Tool. With this an operator can:
  - ✓ display a list of CSM III points that show the status of the chiller system
  - ✓ modify the value or status of selected points and then return them to automatic control
  - ✓ display and modify configuration and service data
  - ✓ display maintenance data
  - ✓ display chiller system graphics (ComfortWORKS or Building Supervisor)
- Additional capabilities possible by combining the CSM III with the following CCN products:
  - ✓ Autodial Gateway
  - ✓ Remote CCN Service Interface (RCSI)
  - ✓ Data Collection Option
  - ✓ Comfort Controller
  - ✓ Water System Manager (WSM)
  - ✓ Loadshed Option
  - ✓ Alarm Printer Interface Module (APIM)

CONTROL FUNCTIONS

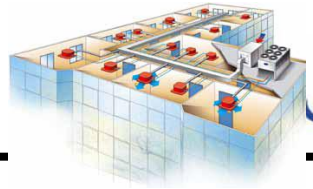
- Automatic chiller start/stop
- Two seasonal chiller start/stop sequencing modes with add/drop capability
- Designated standby chiller support
- Occupancy-based plant operation with configuration override
- Soft loading
- Load balancing
- Bypass valve control
- Chilled water set-point reset
- Loadshed demand limiting
- Chiller fault handling and capacity matching
- System alarm messages and alarm history
- Short- and long-term power failure recovery



Touch screen interface

Aquasmart Evolution

Hydronic Systems



FEATURES

- The Aquasmart Evolution system ensures significant energy savings combined with optimised user comfort by managing building zoning, occupancy and room temperatures in accordance with needs.
- Terminal fan coil units can be organised in up to 32 zones to optimise building management by zone requirement and according to building design conditions.
- The Touch Pilot System Manager – the brain and building user interface – was designed to facilitate use and allow rapid access to manage and configure system operation to maximise energy savings at comfort conditions.
- System components are fitted with communicating controls allowing the System Manager to ommunicate with and obtain feedback on user needs and Operation. Based on the system requirements the System Manager coordinates the system heating and cooling modes for maximum comfort and optimal energy consumption, respecting the comfort parameters and occupancy schedules for the building zones.
- The Aquasmart system offers affordable building HVAC system management featuring capabilities usually only available in more expensive solutions and requiring additional building-by-building programming development.

DESCRIPTION

- Aquasmart Evolution is a complete hydronic heating, ventilating and air conditioning (HVAC) system ideal for residential and light commercial applications from offices, commerce to hotels and hospitals. It offers perfect comfort for building occupants whilst optimising economical operation for applications up to 2500 m2. Larger installations with multiple systems can be managed and integrated within a single Building Management solution thanks to the new BACnet option capability (available as option in 2012).
- An Aquasmart system consists of up to 128 terminal fan coil units, served by up to two chillers or heat pumps (master-slave), to supply cooling and/ or heating to occupied spaces and fresh air handling units. The system manager can fully integrate and control up to eight Carrier fresh air handling units* (39SQ). Each fresh air plant can be associated with specific terminal fan coils and/or zones for optimum building use management with occupancy, controlling and minimising energy use.
- Individual schedules can be set up and managed for each and all air treatment plants. The Aquasmart System Manager supplies building information enabling dynamic and precise control of the 39SQ's nigh ttime free-cooling feature to further reduce building energy consumption.

ENERGY SAVING

The Aquasmart system controls offer superior comfort levels. By optimising and controlling the system components building owners and occupants can save energy and reduce their energy bill, contributing to a reduction in building carbon emissions.

Literature

Electronic thermostats

Fan Coil Controllers

FEATURES

- Fan operation - With the fan speed selector, fan mode can be set either manually or automatically. In the manual mode it is possible to select three fan speeds (low/medium/high) according to personal preference. In the auto mode fan speed is regulated by a microprocessor in the control, based to the temperature chosen.
- Temperature selector - This is designed to maintain the temperature at the desired level. The reference value at the centre of the range is 20°C. By turning the knob towards the symbol (-) the temperature is reduced from the original setting (minimum value is 10°C). By turning the knob towards the symbol (+), the temperature is raised from the original setting (maximum value is 30°C).
- Energy saving mode - This function is especially useful when air conditioning at night or in rooms where the user is likely to be absent for a longer period of time. In this case, pushing the button raises the temperature during cooling by 4°C and lowers it during heating by 4°C.
- Seasonal changeover
  - ✓ Manual - Selection of heating/cooling is done manually by pushing the button on the control.
  - ✓ Centralised (only for type A control) - Centralised seasonal changeover is possible in two ways:
  - ✓ by a switch located on the central control panel that allows heating/cooling mode changeover (to be provided by the installer).
  - ✓ by a temperature sensor located in contact with the entering water pipe - Automatic, based on air temperature (only for type B control) – The automatic seasonal changeover allows automatic switching of the fan coil operating mode to cooling or heating, depending on the temperature set by the user and on the room temperature.
- External contact - The control has a 230 V input that can be used as window contact or presence detector. When such a signal is activated (presence of line voltage on the terminal block contact) the control is set to OFF mode. As a consequence, all outputs (fan, valves etc.) are disconnected, and only frost protection is active, if switched ON by the appropriate dip-switch.
- Frost-protection - This function keeps the temperature from dropping below 7°C in rooms not used for long periods of time.

Operator Interfaces

The Carrier electronic thermostats are designed to control and optimise the operation of hydronic terminal fan coil
units. They exist in two versions that match all terminal fan coil configurations:

	Type A	Type B
2-pipe	x	
2-pipe changeover	x	
2-pipe and electric heater		x
2-pipe changeover and electric heater		x
4-pipe		x

A

B

HDB Controllers

Fan Coil Controllers

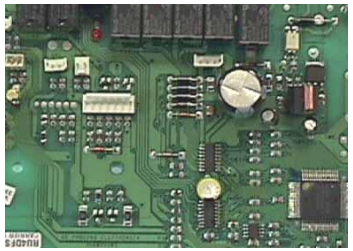
FEATURES

- The HDB controller is a microprocessor-based controller designed to control and optimise the operation of hydronic terminal fan coil units.
- Factory-installed on the terminal fan coil - The controller is factory-installed on the terminal fan coil; the assembly is also tested at the factory. As a result, field installation is extremely simple.
- Ease of grouping - As an option, the HDB control can be equipped with a grouping board that is used to connect up to 15 units with a bus. All units connected together will operate under the same conditions.
- Louvre control - For terminal fan coils equipped with motorised louvres, the HDB controls the louvre position as defined by the user or in swing mode.
- External contact - The control has an input that can be used to remotely set the unit to economy mode.
- Scheduling - If the unit is used with an infrared user interface, unit operation time can be scheduled on a daily basis. Three start times and three stop times can be programmed.
- Timer - If the unit is used with an infrared user interface it can operate for a predefined duration before switching to eco mode or off.

USER INTERFACES

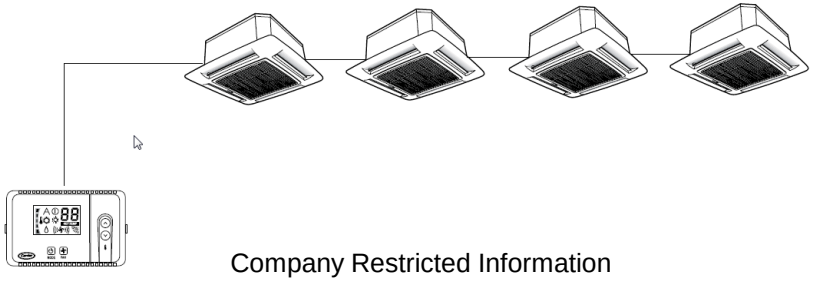
Depending on the application, two user interface types can be selected:

- a wired user interface that can be mounted on the wall or inside compatible terminal fan coils (42N)
- an infrared user interface to be used together with a wall-mounted infrared received or a receiver incorporated in compatible terminal fan coils (42GW)



Carrier Room Conroller (CRC2(

Infrared Remote Control (IR2) and receiver



NTC Controllers

Fan Coil Controllers

FEATURES

▪The NTC controller controls and optimises the operation of hydronic terminal fan coil units. It is a microprocessor-based CCN (Carrier Comfort Network) compatible communicating controller with energy-saving algorithms.

▪ Energy-saving algorithms manage water valve operation and fan speed control simultaneously to ensure minimum energy consumption whilst maximising comfort conditions for the occupant.

▪ Factory-installed on terminal fan coils

▪The NTC controller is factory-installed on the terminal fan coil; the assembly is also factory-tested. As a result, field installation is extremely simple.

▪ A wide range of user interfaces

▪ Depending on the application, two user interface types can be selected:

- ✓- a simplified wired analogue user interface (SUI) that can be wall-mounted
- ✓- a wired communicating user interface (CRC2) that can be wall-mounted or incorporated in compatible terminal fan coils (42N)
- ✓- an infrared user interface (IR2) for use together with a wall-mounted infrared received or a receiver incorporated on compatible terminal fan coils (42GW)
- ✓- a multi-function user interface (ZUI) that can control comfort, lights and blinds within a Carrier system

ADVANCED FUNCTIONS

▪ Low Energy Consumption (LEC) variable speed control.

▪ The NTC controller can drive the fan speed continuously within a configurable range for optimal thermal and acoustic comfort.

▪ Hydronic control - The NTC controls both floating and fixedpoint value actuator types (230 V on-off and 230 V three point).

▪ Demand controller ventilation (DCV) - On fan coils equipped with CO2 sensors and fresh air dampers, the NTC controller can adjust the amount of fresh air admitted to the room, as required by the occupants.

▪ IAQ management - The NTC controller can control all features related to Indoor Air Quality that are included in Carrier terminal fan coil units.

NETWORK COMMUNICATION

• The NTC communicating controller can be connected on an RS 485 bus, using the Carrier Comfort Network (CCN) protocol.

• Units equipped with the NTC controller can be part of the Aquasmart Evolution system.)

Carrier Room Conroller (CRC2(

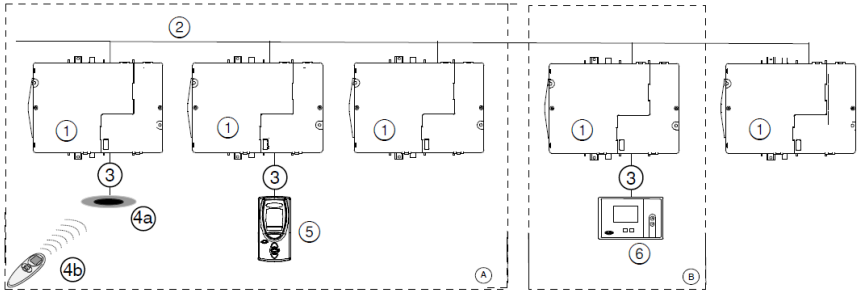
Simplified User Interface (SUI)

Infrared Remote Control (IR2) and receiver

Zone User Interface (ZUI)

Legend

1	NTC controller
2	Secondary communication bus
3	User interface connection
4	IR2
5	ZUI2
6	CRC2
A	Room A
B	Room B



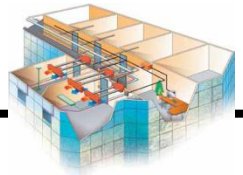
Over-View

Fan Coil Controllers

	Thermostats	HDB	NTC
Control algorithms			
On-off	x	x	
Proportional-integral			x
Valve management			
Air flow control only (no valve)	x	x	
On-off actuators	x	x	x
Proportional valves			o
Fan control			
Three speeds	x	x	x
Optimum fan speed selection	x	x	x
Variable speed			o
Main functions			
Setpoint control	x	x	x
Occupied/unoccupied mode	x	x	x
Frost protection mode	x	x	x
Window contact input	x	x	x
Measurement of water inlet temperature for automatic seasonal changeover (2 pipes)	Type A	x	x
Automatic seasonal changeover (4 pipes and 2 pipes + electric heater)	Type B	x	x
Manual changeover	x	x	x
Frost protection mode	x	x	x
Continuous ventilation within dead-band	x	x	x
Periodical ventilation within dead-band	x	x	x
Unit grouping		x	x
Louvre control		x	x
On-site configuration		x	x
Supply air temperature monitoring limiting			x
Communication (CCN)			x
Electrical heater loadshed			x
Dirty filter alarm			x
Alarm reporting			x
IAQ control			o
Demand control ventilation (DCV)			o
Free cooling mode			o
User interface			
Digital display		x	x
Automatic or manual fan speed control	x	x	x
Operating mode selection	x	x	x
Occupancy (eco) button	x	x	x

Carrier Comfort Network (CCN)

Building Management System



FEATURES

▪The most advanced technology resulting from Carrier's thorough knowledge of both comfort and controls. It Offers the owner, designer and installer:

- ✓ integrated product and control systems
- ✓ single-point responsibility
- ✓ unique control strategies
- ✓ overall lower installation costs
- ✓ enhanced monitoring capabilities

▪ Whilst each equipment component can operate in a stand-alone mode, all components form a fully-integrated and balanced HVAC system when networked with other Carrier equipment through the Carrier Comfort Network. A three-wire cable is all that is required to connect these products.

COMFORT VIEW

▪ Powerful supervision software package that allows centralised monitoring (local and remote), data collection, report generation and system configuration.
▪ Designed to run on most PCs running on Windows 2000 or Windows XP.
▪ Designed for larger scale building management needs with custom graphical Representation.

COMFORT CONTROLLER

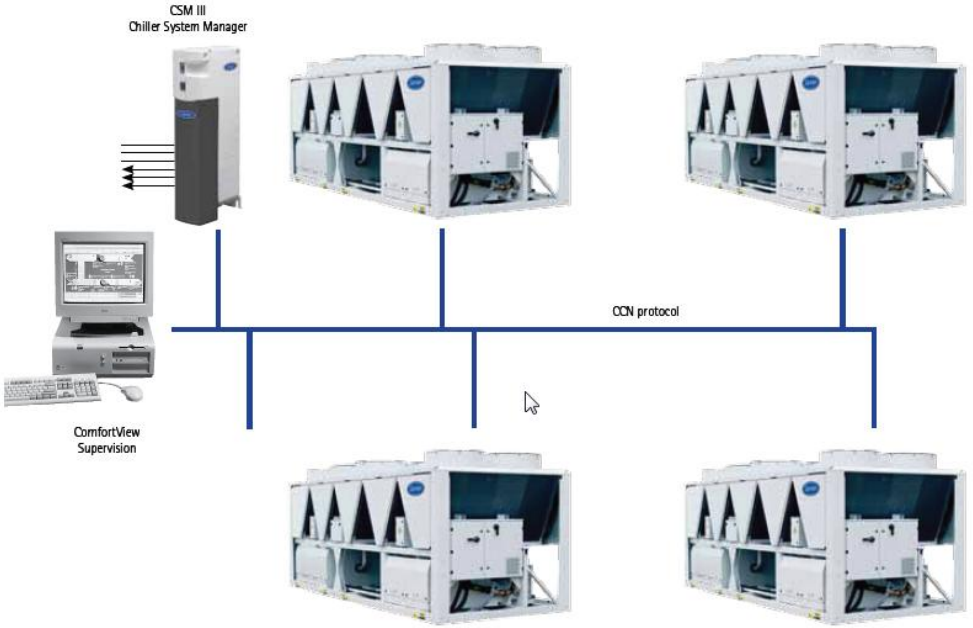
▪ Field-installed device which allows non-Carrier equipment such as boilers, cooling towers and pumps to be controlled and integrated into the overall network.
▪ Fully programmable to suit the application need and optimized control strategies..

PRODUCT INTEGRATE CONTROLLER

▪ Factory-installed product with a level of Monitoring and diagnostic control that can only be achieved with a factory-integrated device.
▪ Product-Integrated Controllers are available on chillers, rooftops, air handling units and terminal fan coil units.

SYSTEM MANAGERS

Carrier offers a complete line of network system products that tie multiple stand-alone products together for a fully integrated, self-adjusting HVAC system:
Example: Chillervisor System Manager (CSM III) for chiller plant control



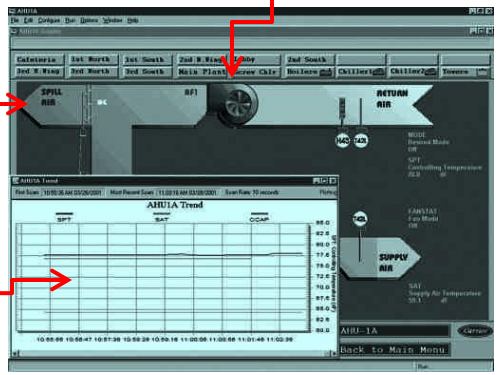
Comfort View Building Management System

FEATURES

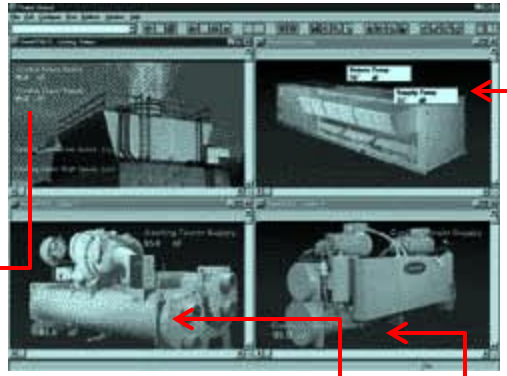
- The primary human interface to the Carrier Comfort Network (CCN).
- Designed to run on any PC utilising the Microsoft" Windows 2000 Professional or Server operating system, or the Windows XP Professional operating system.
- True system multitasking.
- Local Area Network - allows multiple workstations to share a common system database.
- Remote Communications - allows access to remote ComfortVIEW databases.
- Graphical User Interface (GUI) - provides a consistent look and intuitive operation.
- Customised Access Levels.
- Export data into other application software.
- Dynamic Data Exchange (DDE).
- Time and set-point schedule DLL allows third parties access to CCN time and set-point schedules.
- CCN to Ethernet support provides for flexible location of the ComfortVIEW computer.
- Organise and view data in a convenient format and to create your own custom data displays.
- Alarm processing is the automatic and full-time responsibility of ComfortVIEW. Receives, announces, and stores prioritised alarms.
- The Carrier Network Manager allows you to display, modify, and delete the areas, controllers, and data tables in your ComfortVIEW database.
- The Reports function is used to generate reports from network and database data.
- ComfortVIEW report data also allows you to create your own custom reports.

With ComfortVIEW you can get the information you need fast. Link WorkSPACE screens in a logical progression customised for your building and management needs.

ComfortVIEW lets you see your building's equipment operation and easily access time and set-point schedules
– without leaving your office.



With real time trend scanning, you can visually determine how a system is behaving. ComfortVIEW allows you to easily view and record this data.



Reduce troubleshooting time with ComfortVIEW's onscreen interaction. Change temperature set-points, or force conditions – then view the results and determine action, prior to dispatching a mechanic.

This power plant ViewSPACE shows various equipment operating parameters at a glance.

ViewSPACES can use graphics or photos of your actual equipment, for easier analysis of operating conditions.

50UA Series Packaged RoofTop cooling units

7 sizes – 44 to 115 kW (cooling)

MAIN FEATURES

- R410A Refrigerant
- Cu/Alu coils
- Axial “Flying Bird” fans
- Cabinet made of powder-painted sheet metal.
- Compressors are hermetic scroll compressors and mounted on vibration isolators.
- Crankcase heaters are standard for all units.

EFFICIENCY

- EER Cooling 2,9
- Eurovent certified

SOUND

- Sound Power 86 – 91 dB(A)

DIMENSIONS

- Length (mm): 2125 - 3581
- Width (mm): 2193
- Height (mm): 1413 -1825

Literature

COMMUNICATION CAPABILITIES

- CCN/JBus, Lon or BACnet gateways

MAIN OPTIONS* / ACCESSOIRES**

- **Electric heaters**, various capacities*
- **Hot-water coils**, various capacities*
- Various coil protection options*
- Fresh-air sliding panel*
- Manual outdoor air damper*
- Economizer, thermostatic or enthalpy control, with or without CO2 sensor control*
- Supply fan with various high static pressure options with or without soft starter*
- Standard supply fan *
- Various filter options*
- Stainless steel drain pan*
- **Energy recovery module*.....** INFO
- Various return/exhaust air options*
- Various temperature sensor options*
- Dirty filter detection*
- Supply air flow detection*
- Smoke detector* / Fire thermostat*
- Duct connection fixing frame*
- Roof curb**
- Transition roof curb (French ERP)**
- Remote user interface (Pro-Dialog+)**

50UH Series Packaged RoofTop Reversible **Heat Pumps**

7 sizes – 44 to 115 kW (cooling)
44 to 121 kW (heating)

MAIN FEATURES

- R410A Refrigerant
- Cu/Alu coils
- Axial “Flying Bird” fans
- Cabinet made of powder-painted sheet metal.
- Compressors are hermetic scroll compressors and mounted on vibration isolators.
- Crankcase heaters are standard for all units.

EFFICIENCY

- COP 3,2
- Eurovent certified

SOUND

- Sound Power 86 – 91 dB(A)

DIMENSIONS

- Length (mm): 2125 - 3581
- Width (mm): 2193
- Height (mm): 1413 -1825

Literature

COMMUNICATION CAPABILITIES

- CCN/JBus, Lon or BACnet gateways

MAIN OPTIONS* / ACCESSOIRES**

- **Electric heaters**, various capacities*
- **Hot-water coils**, various capacities*
- Various coil protection options*
- Fresh-air sliding panel*
- Manual outdoor air damper*
- Economizer, thermostatic or enthalpy control, with or without CO2 sensor control*
- Supply fan with various high static pressure options with or without soft starter*
- Standard supply fan *
- Various filter options*
- Stainless steel drain pan*
- **Energy recovery module*.....** INFO
- Various return/exhaust air options*
- Various temperature sensor options*
- Dirty filter detection*
- Supply air flow detection*
- Smoke detector* / Fire thermostat*
- Duct connection fixing frame*
- Roof curb**
- Transition roof curb (French ERP)**
- Remote user interface (Pro-Dialog+)**

48UA Series Packaged RoofTop Cooling + GAS HEATING

7 sizes – 44 to 115 kW (cooling)
42 to 151 kW (heating)

MAIN FEATURES

- 48UA units are packaged rooftop cooling units, factory fitted with a multistage gas heater.
- R410A Refrigerant
- Cu/Alu coils
- Axial “Flying Bird” fans
- Cabinet made of powder-painted sheet metal.
- Compressors are hermetic scroll compressors and mounted on vibration isolators.
- Crankcase heaters are standard for all units.
- Gas heating system designed as an alternative to the hot water coil or electric heating options. Units are available with three gas heating modules.
- Tubular dimpled gas heat exchanger optimises heat transfer for maximum efficiency.
- Modular burner assembly consists of a series of injectors.
- Induced draft combustion system for improved efficiency.
- Integrated gas unit controller (IGC).

DIMENSIONS

- Length (mm): 2125 - 3581
- Width (mm): 2193
- Height (mm): 1413 -1825

COMMUNICATION CAPABILITIES

- CCN/JBus, Lon or BACnet gateways

MAIN OPTIONS* / ACCESSOIRES**

- **Natrural gas or propane gas modules various capacities***
- Various coil protection options*
- Fresh-air sliding panel*
- Manual outdoor air damper*
- Economizer, thermostatic or enthalpy control, with or without CO2 sensor control*
- Supply fan with various high static pressure options with or without soft starter*
- Standard supply fan *
- Various filter options*
- Stainless steel drain pan*
- **Energy recovery module*.....** INFO
- Various return/exhaust air options*
- Various temperature sensor options*
- Dirty filter detection*
- Supply air flow detection*
- Smoke detector* / Fire thermostat*
- Duct connection fixing frame*
- Roof curb**
- Transition roof curb (French ERP)**
- Remote user interface (Pro-Dialog+)**

Literature

48UH Series Packaged RoofTop Heat Pump + GAS HEATING

7 sizes – 44 to 115 kW (cooling)
42 to 151 kW (heating)

MAIN FEATURES

- 48UA units are packaged rooftop cooling units, factory fitted with a multistage gas heater.
- R410A Refrigerant
- Cu/Alu coils
- Axial “Flying Bird” fans
- Cabinet made of powder-painted sheet metal.
- Compressors are hermetic scroll compressors and mounted on vibration isolators.
- Crankcase heaters are standard for all units.
- Gas heating system designed as an alternative to the hot water coil or electric heating options. Units are available with three gas heating modules.
- Tubular dimpled gas heat exchanger optimises heat transfer for maximum efficiency.
- Modular burner assembly consists of a series of injectors.
- Induced draft combustion system for improved efficiency.
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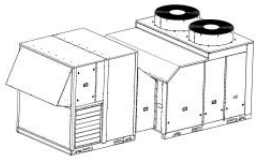
- Transition roof curb (French ERP)**
- Remote user interface (Pro-Dialog+)**

Literature

Energy Recovery Module (option)

For Packaged Roof Top units



FEATURES

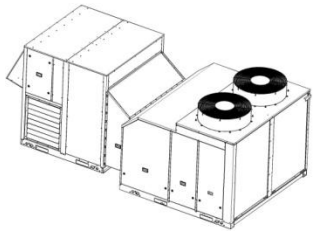
▪ The ERM is dual-flow individual unit equipped with a high-efficiency air-to-air Eurovent certified heat recovery wheel (efficiency 63% to 88%), with integrated variable air volume plug fan and a control system for a plug & play installation.

▪The modules are especially designed to ensure economical extraction of indoor air and taking in fresh air to meet current and future requirements for high energy efficiency buildings

Rotary condensation heat exchanger wheel : it reclaims up to 90% of the heat from the extract air and transfers it to the supply air, considerably reducing the thermal load on the heating and air conditioning equipment.
Its performances are Eurovent Certified.

▪**Variable exhaust air volume** (no building pressurization) The exhaust air plug fan speed is independently controlled by frequency inverters directly connected to ProDialog+ controller inside rooftop unit.

▪**Easy installation:** power & control cable connected to RTU, field mounted extract/supply ducts

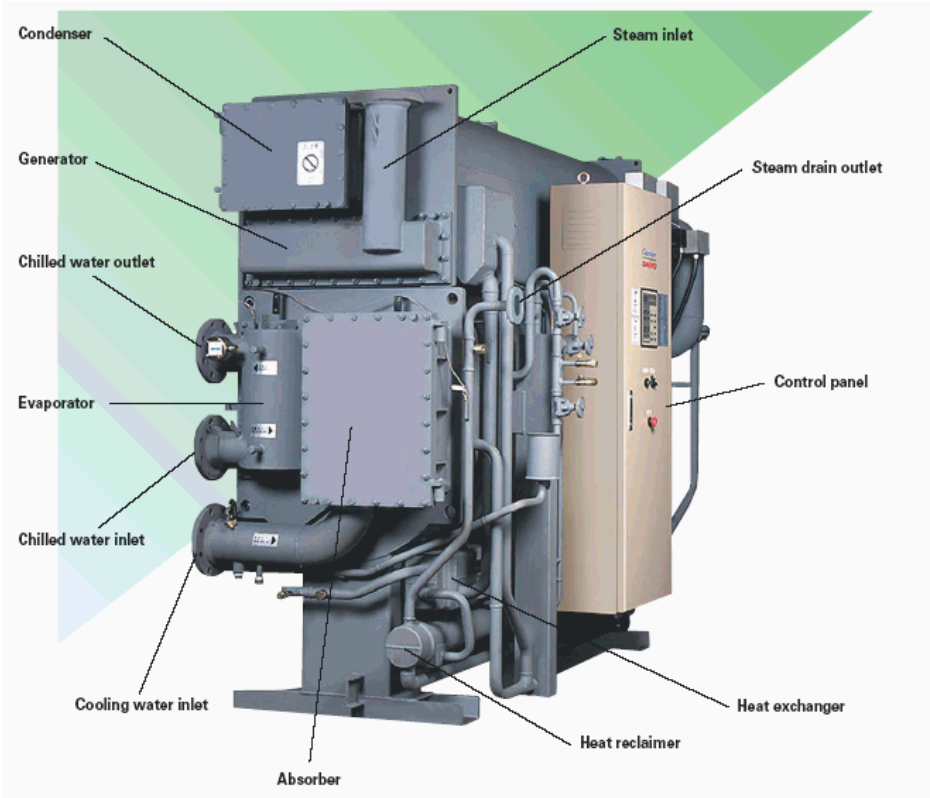


Literature

16 **TJ** series **Steam-Fired Absorption Chiller**

352 to 2461 kW (15 units)

SUPER ABSORPTION



FEATURES

- Fifteen sizes with nominal cooling capacities from 352 to 2461 kW.
- Designed for cooling applications where low-pressure steam is available as waste heat.
- Can tie into district steam systems.
- Allows diversification of critical cooling requirements. Critical cooling loads are met with minimal electrical power input with steam-fired chillers.
- Allows use of smaller emergency generators since the electrical load associated with an absorption chiller is minimal, compared to an electrically driven chiller.
- Ozone-friendly and CFC-free. Cooling requirements are met without chlorine based refrigerants.
- Minimises global warming effect by greatly reducing power consumption and eliminating the generation of greenhouse gases.
- Reduced noise and vibration levels. The absorption chiller does not use a large motor-compressor, leading to quiet, trouble-free operation.
- Small footprint. The high efficiency associated with these chillers results in a reduction of the required installation space.
- Auto-diagnosis system monitors operating conditions, predicts chiller information and maintains stable operation.
- Advanced high-precision control system.
- Absorption pump with inverter control (option) for energy-saving operation.
- High-performance purge system maintains unit performance and minimises maintenance requirements.
- State-of-the-art protection devices guarantee enhanced operating safety.

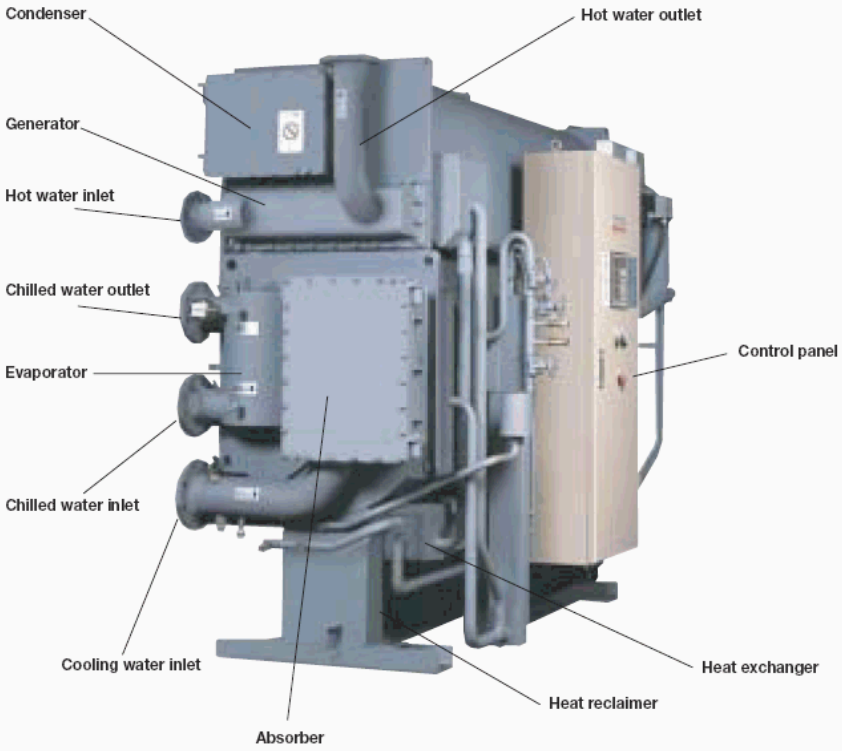
Literature

Single Effect

16 **LJ** series **Hot Water-fired Absorption Chiller**

264 to 1846 kW (15 units)

SUPER ABSORPTION



FEATURES

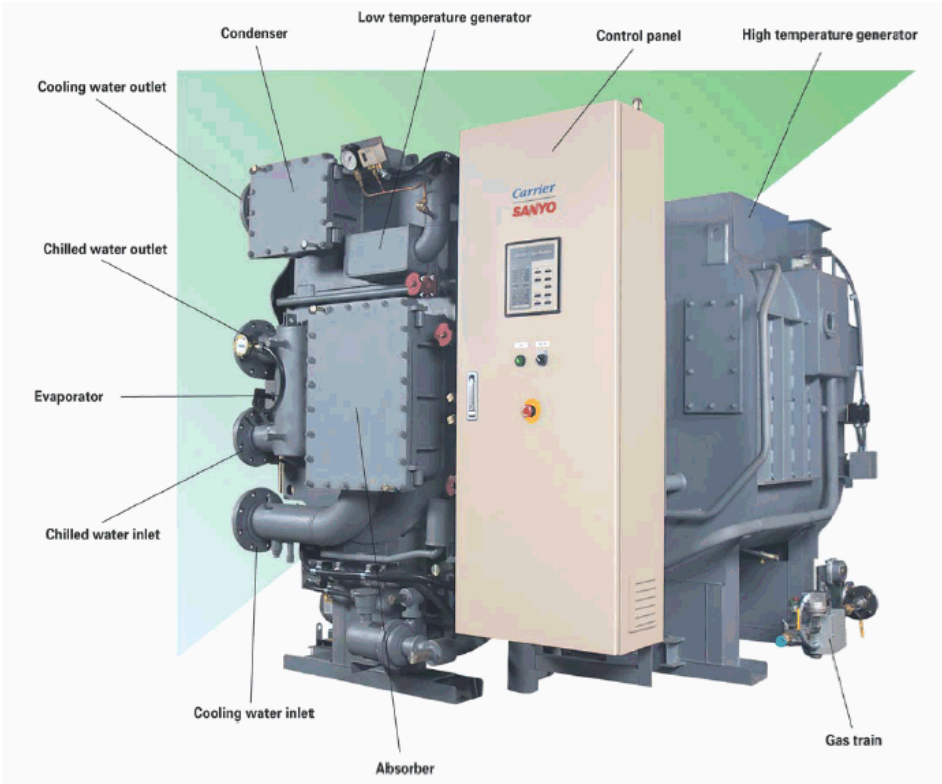
- Fifteen sizes with nominal cooling capacities from 264 to 1846 kW.
- Designed to provide chilled water from waste heat sources, generated from industrial processes and cogeneration systems.
- Allows diversification of critical cooling requirements. Critical cooling loads are met with minimal electrical power input with hot water-fired chillers.
- Allows use of smaller emergency generators since the electrical load associated with an absorption chiller is minimal, compared to an electrically driven chiller.
- Ozone-friendly and CFC-free. Cooling requirements are met without chlorine based refrigerants.
- Minimises global warming effect by greatly reducing power consumption and eliminating the generation of greenhouse gases.
- Reduced noise and vibration levels. The absorption chiller does not use a large motor-compressor, leading to quiet, trouble-free operation.
- Small footprint. The high efficiency associated with these chillers results in a reduction of the required installation space.
- Auto-diagnosis system monitors operating conditions, predicts chiller information and maintains stable operation.
- Advanced high-precision control system.
- Absorption pump with inverter control (option) for energy-saving operation.
- High-performance purge system maintains unit performance and minimises maintenance requirements.
- State-of-the-art protection devices guarantee enhanced operating safety.

Literature

Single Effect

16 **DJ** series **Direct-Fired Absorption Chiller/Heaters**

352 to 5274 kW (23 units) ***SUPER ABSORPTION***

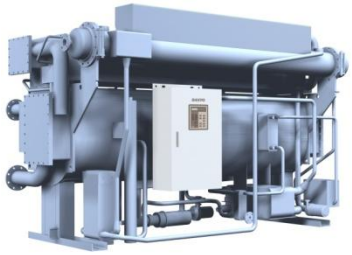


FEATURES

- Twenty-three sizes with nominal cooling capacities from 352 to 5274 kW and heating capacities from 268 to 4026 kW.
- The 16DJ absorption chillers/heaters offer building owners a better solution for many new and retrofit applications. Installation of a direct-fired chiller/heater eliminates the need for a boiler, reducing the initial cost of the system.
- Excellent for peak shaving during high electrical demand periods.
- Allows diversification of critical cooling requirements. Critical loads are met with minimal electrical power input.
- Allows use of smaller emergency generators since the electrical load associated with an absorption chiller is minimal.
- Ozone-friendly and CFC-free.
- Minimises global warming effect by greatly reducing power consumption.
- Reduced noise and vibration levels. The absorption chiller does not use a large motor-compressor, leading to quiet, vibration-free operation.
- Small footprint. The high efficiency associated with double-effect chillers results in reducing the required installation space.
- Auto-diagnosis system monitors operating conditions, predicts chiller information and maintains stable operation.
- Advanced high-precision control system.
- Absorption pump with inverter control for efficient, energy-saving operation.
- High-performance purge system minimises maintenance requirements.
- State-of-the-art protection devices guarantee enhanced operating safety.

Literature

Double Effect



16 **NK** series **Steam-Fired Absorption Chiller**

345 to 4652 kW (18 units) ***SUPER ABSORPTION***

FEATURES

Eighteen sizes with nominal cooling capacities from 345 to 4652 kW.
• The 16NK absorption chillers are designed for cooling applications where low-pressure steam is available as waste heat.
• Can tie into district steam systems.
• Allows diversification of critical cooling requirements. Critical cooling loads are met with minimal electrical power input.
• Allows use of smaller emergency generators since the electrical load associated with an absorption chiller is minimal.
• Ozone-friendly and CFC-free.
• Minimises global warming effect by greatly reducing power consumption and eliminating the generation of greenhouse gases.
• Reduced noise and vibration levels. The absorption chiller does not use a large motor-compressor, leading to quiet, vibration-free operation.
• Small footprint. The high efficiency associated with double-effect chillers results in a reduction of the required installation space.
• Auto-diagnosis system monitors operating conditions, predicts chiller information and maintains stable operation.
• Advanced high-precision control system.
• Absorption pump with inverter control for efficient, energy-saving operation.
• High-performance purge system minimises maintenance requirements.
• State-of-the-art protection devices guarantee enhanced operating safety.

Literature

Double Effect

80HMA **Comfort Module** range for Monobloc Heat Pumps

5 sizes – 4 to 20 kW

MAIN FEATURES

Single zone comfort module:
Control back up and booster heater (built in EH or Boiler)
Control up to 8x30AWH inverter heat pump with bus communication
✓Third party remote control connections with dry contacts
✓Compatible with solar thermal DHW
✓Control diverting valve for DHW
✓Reversible or heating only
✓Single or three phase booster EH
✓10 liter buffer tank
✓Expansion vessel
2 zones kit:
✓Modulating 3 way valve
✓Hydraulic decoupling
✓Circulating pumps

Interface

Literature

BENEFITS

Peace of mind
- Complete system from one single manufacturer
- Fully programmable thermostat & child lock
- Simple and Limited control settings
- 2 zones systems made easy
- Product made in Europe with Nationwide service

Savings
- System using energy efficient inverter HP
- High system integration for proper HP control
- DHW available all year round, connectable to solar
- Limited installation time
- Widely available spares

Comfort
- Constant monitoring of outdoor weather conditions
- Fully programmable thermostat & child lock
- Product made in Europe with Nationwide service

ACCESSORIES

• Communication kit for installation on the heat pump
• Additional user interface
• Remote outdoor sensor to maximises comfort
• Domestic hot water tank
• Domestic hot-water three-way valve
• Thermal cut-out, floor heating protection
• Piping kit to install domestic hot water valve and actuator inside the unit.
• Cover panel for detached two-zone kit
• Kit to add three-way valve+actuator in second zone
• Two-zone kit allows independent control of two comfort zones
• Swimming pool kit controls

Single zone module

✓ 8 liters expansion vessel
✓ Manometer
✓ Pressure switch
✓ 10 liters buffer tank
✓ Electrical heater
✓ Moving elec panel
✓ User interface
✓ LWT Temperature sensor
✓ Boiler water connections
✓ Safety valve

Dual zone kit

PRO-DIALOG

Chilled-Water Plan Control System

PRO-DIALOG PLUS operator interface

CONTROL FEATURES

Pro-Dialog Plus combines Intelligence with operating simplicity. The control constantly monitors all machine parameters and precisely manages the operation of compressors, expansion devices, fans and of The evaporator water pump for optimum energy efficiency.

■ Ease-of-use

User interface with synoptic diagram for intuitive display of the principal operating parameters: number of compressors operating, suction/discharge pressure, compressor operating hours, set point, air temperature, entering/leaving water temperature

Ten menus for direct access to all machine commands, including fault

A/C

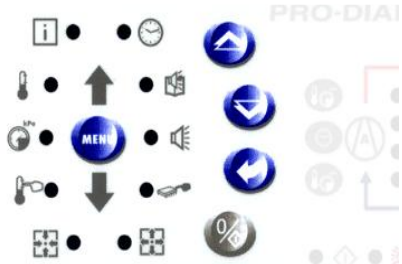
W/C

MAIN FUNCTIONS

- On/Off control
  - Local control selection
  - Remote on/off contact
  - Time schedule
  - Outside Air Temperature override
- Operation feedback
  - Ready to start or running indicator
- Two cooling setpoints
  - Manual selection
  - Remote contact
  - Time schedule
- Setpoint reset
  - Outside air temperature
  - Water delta t
- Heat Reclaim/Cool Mode selection
  - Manual selection
  - Remote contact
- One remote contact with single Demand limit setpoint
- Demand limit setpoint for Night period
- Separate outputs for alarm or alert reporting
- Maintenance alerts for pumps, filter and loss of charge servicing
- New black box function
- Master Slave based on common leaving temperature
- Compressor protected against short cycling by Auto-adaptive control (Carrier patent)

Immediate display of :

- Temperatures
- Pressures
- Operating hours
- Control point



It gives access to all PRO-DIALOG PLUS data and operating functions.

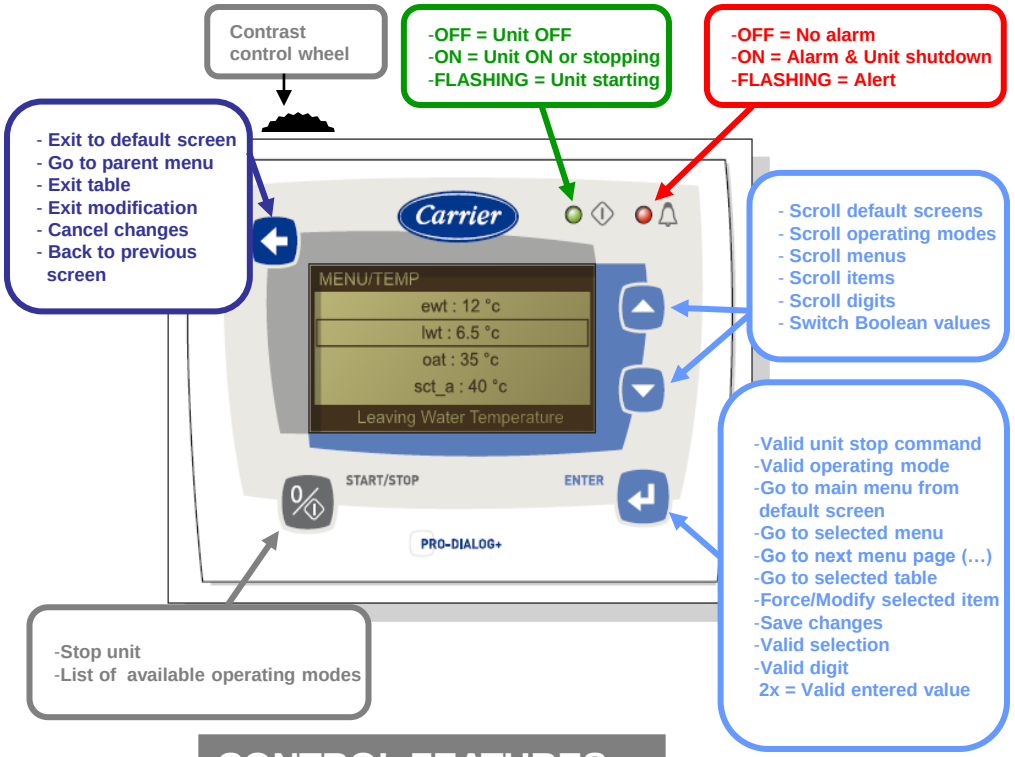
It consists of:

- A two-digit display showing the number of the item selected.
- A four-digit display showing the contents of the item selected.
- LEDs and buttons for unit start/stop, menu selection, menu item selection and value adjustment.

PRO-DIALOG

Chilled-Water Plan Control System

PRO-DIALOG + …HMI operator interface



MAIN FUNCTIONS (* *For water cooled units)*

- Local control
- Remote control
- 3 configuration level with 3 independent passwords
- Water exchanger control: entering or leaving
- Low and high pressure monitoring
- Circuit low saturated suction temperature protection
- Circuit high discharge pressure protection
- Manual heat/cool select
- Off/on delay at startup
- Unit on/off schedule control
- CCN network compatibility
- CSM control
- Aquasmart System Manager compatibility
- Dual cooling/heating setpoint time schedule controlled
- Dual cooling/heating setpoints through remote contact
- Cooling reset based on water exchanger delta T
- *Heating reset based on water exchanger delta T* *
- Single Demand limit controlled through remote contact
- Demand limiting through CCN control
- Demand limiting based on current control
- Cooler pump #1 & # 2 control sequence
- *Condenser pump #1 & # 2 control sequence* *
- Water pump periodical quick start sequence
- Master Slave based on common leaving temperature

CONTROL FEATURES

- **Modern displays**
- **Energy features**
- **Multiple languages**
- **Service & Commissioning**
- **Efficiency & Comfort**
- **Easy Plant Room integration**
- **Remote monitoring**
- **Black box**

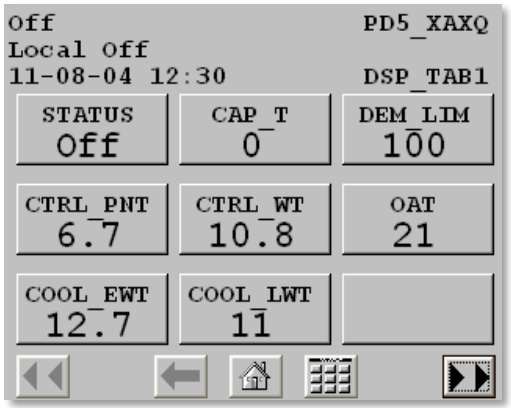
PRO-DIALOG

Chilled-Water Plan Control System

PRO-DIALOG Touch screen interface

CONTROL FEATURES

- **Modern displays**
- **Energy features**
- **Multiple languages**
- **Service & Commissioning**
- **Efficiency & Comfort**
- **Easy Plant Room integration**
- **Remote monitoring**
- **Black box**
- **Flash downloadable memory**



MAIN FUNCTIONS

- On/Off control
  - Local control selection
  - Remote on/off contact
  - Time schedule
  - Outside Air Temperature override
- Operation feedback
  - Ready to start or running indicator
- Two cooling setpoints
  - Manual selection
  - Remote contact
  - Time schedule
- Setpoint reset
  - Outside air temperature
  - Water delta t
- Heat Reclaim/Cool Mode selection
  - Manual selection
  - Remote contact
- One remote contact with single Demand limit setpoint
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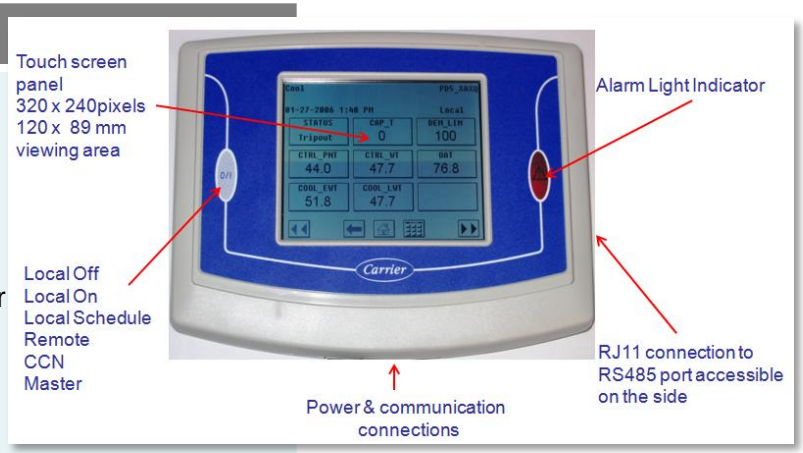
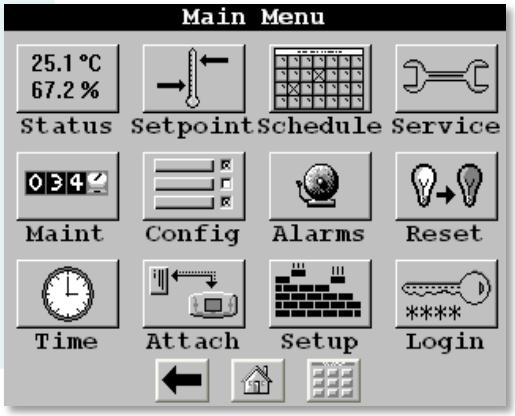
- New black box function
- Master Slave based on common leaving temperature





PRO-DIALOG

Chilled-Water Plan Control System

TOUCH PILOT operator interface

CONTROL FEATURES

- **Modern displays**
- **Energy features**
- **BAS intergration Web servers**
- **Open protocol (Bacnet Ip)**
- **Service & Commissioning**
- **Efficiency & Comfort**
- **Easy Plant Room integration**
- **Remote monitoring**
- **Multiple languages (unicode)**
- **Spare parts list access**
- **Black box, e-mail,**
- **Manuals**
- **Trending**

MAIN FUNCTIONS (* *For water cooled units)*

- Local control
- Remote control
- CCN control
- 3 configuration level with 3 independent passwords
- *Water valve control* *
- Cooler fluid type: water, medium brine or low brine
- *Condenser fluid type: water or brine* *
- *Dry cooler* *
- Water exchanger control: entering or leaving
- Low and high pressure monitoring
- Circuit low saturated suction temperature protection
- Circuit high discharge pressure protection
- Manual heat/cool select
- Off/on delay at startup
- Unit on/off schedule control
- CCN network compatibility
- CSM control
- Aquasmart System Manager compatibility
- Dual cooling/heating setpoint time schedule controlled
- Dual cooling/heating setpoints through remote contact
- Cooling reset based on water exchanger delta T
- *Heating reset based on water exchanger delta T* *
- Single Demand limit controlled through remote contact
- Demand limiting through CCN control
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- Cooler pump #1 & # 2 control sequence
- *Condenser pump #1 & # 2 control sequence* *
- Water pump periodical quick start sequence
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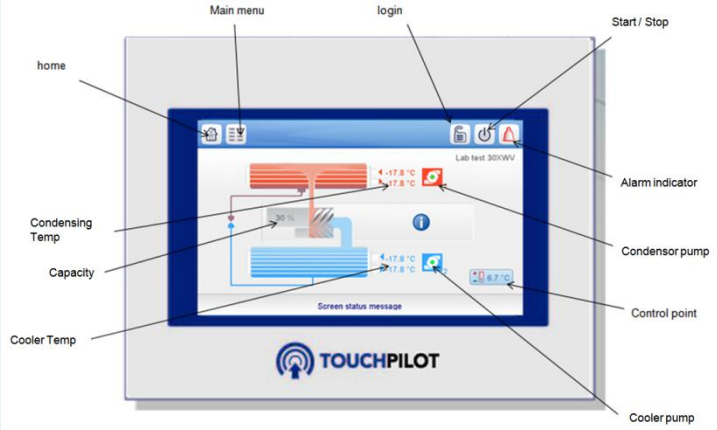
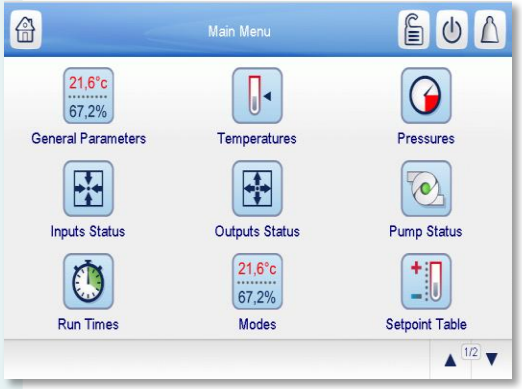
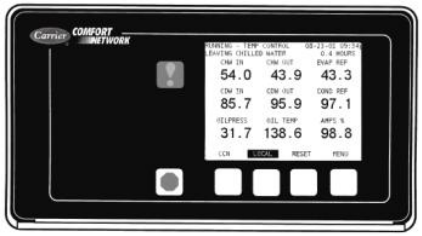




Chilled-Water Plan Control System

ICVC operator interface



CONTROL FEATURES

The ICVC (Interface Chiller Visual Control), that can be configured to display units in Imperial or metric, provides unparalleled ease of operation. A 16-line by 40-character
LCD (Liquid Crystal Display) features four menu-specific soft keys. Default display offers easy, quick display of key chiller operation data, simplifying the interaction between machine and user. Local languages are available upon request

MAIN FUNCTIONS

- **Chilled-water reset**
- **Demand limiting**
- **Ramp loading**
- **Automated controls test**
- **365-day real time clock**
- **Occupancy schedules**
- **Extensive service menu**
- **Battery backup**
- **Other control features include:**

Display of over 125 operating, status and diagnostic messages for improved user interface.

- **Microprocessor-controlled oil heater**
- **Safeties**

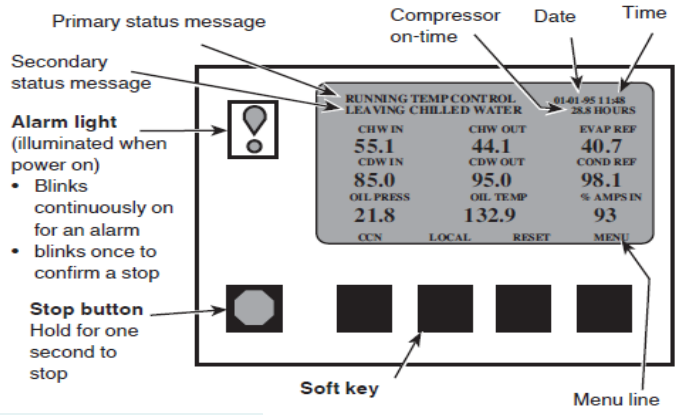
Unit is automatically shut down when any of the following conditions occur:
-- Motor overcurrent
-- Over voltage*
-- Under voltage*
-- Single cycle dropout*
-- Bearing oil high temperature
-- Low evaporator refrigerant temperature
-- High condenser pressure
-- High motor temperature
-- High compressor discharge temperature
-- Low oil pressure
-- Prolonged surge
-- Loss of cooler water flow
-- Loss of condenser

- **Alarm file**

This file maintains the last 25 time- and date-stamped alarm and alter messages in memory; this function reduces troubleshooting time and cost.

- **Overrides**

The control system detects conditions which approach protective limits and takes self-corrective action prior to an alarm occurring.



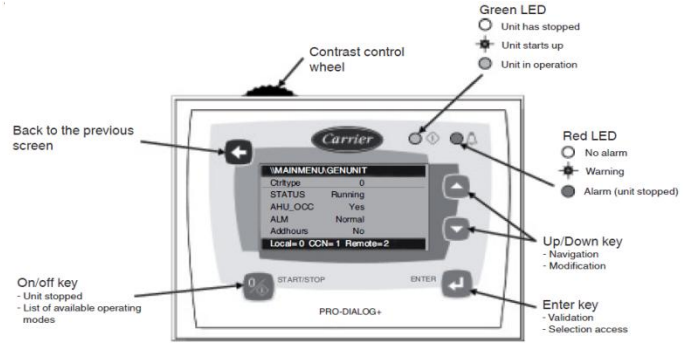
PRO-DIALOG Control System for 39SQC /R/P Air Handling Units

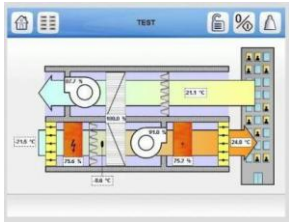
PRO-DIALOG + ...HMI operator interface (option)

With Pro-Dialog everything is possible!

Pro-Dialog AHU control combines superior intelligence with simplicity of use.
It controls the operation of all components and optimises power consumption. Temperature control, based on return, supply or room air, adjusted for outside temperature, history of possible incidents, immediate air flow measurement etc.

The integrated web server gives access to the operating parameters from any standard internet browser. This user-friendly approach permits simple equipment control - the user is guided at every step.
The information is displayed in the language chosen by the user.
The Pro-Dialog+ user interface, available as an option can be installed up to 300 metres from the unit, and a single interface allows remote control of several air handling units.





MAIN FEATURES

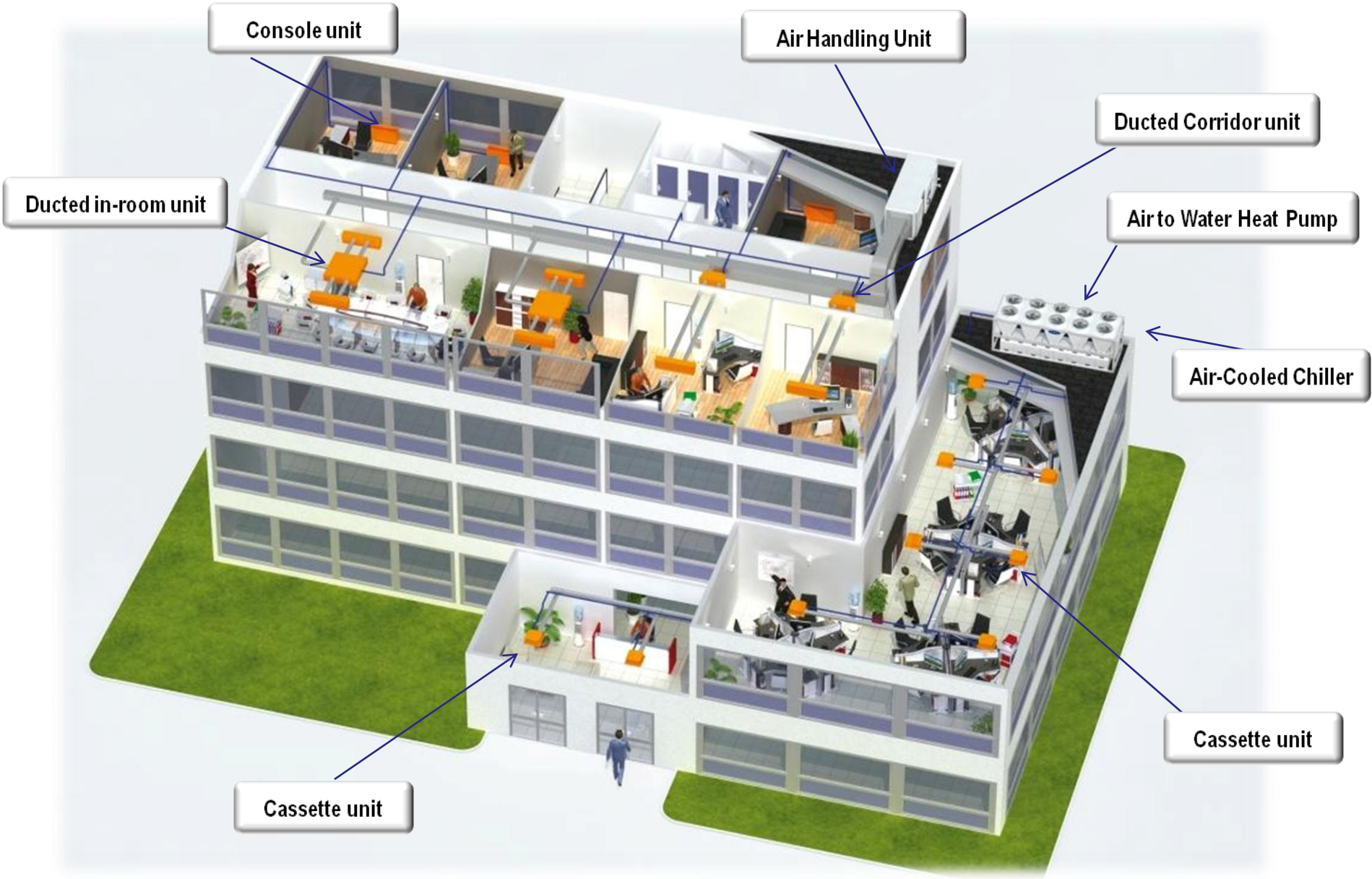
KEY CONTROL FUNCTIONS
- Built in time clock
- Temperature control (Supply or extract or room temperature, Outdoor temperature compensation)
- Summer night free cooling control
- Air volume control -Constant volume or constant pressure or variable air volume ($C0_2$ sensor)
- Safeties & alarms - Service & alarm signals, Alarm history

FRIENDLY OPERATOR INTERFACES
- Integrated WEB server - Access from any computer, No specific software required
- Pro-Dialog+ interface (option) - Local or remote installation up to 300 m, One interface for multiple units
- Web server & Pro-Dialog key features - Four access levels protected by password, Multiple languages

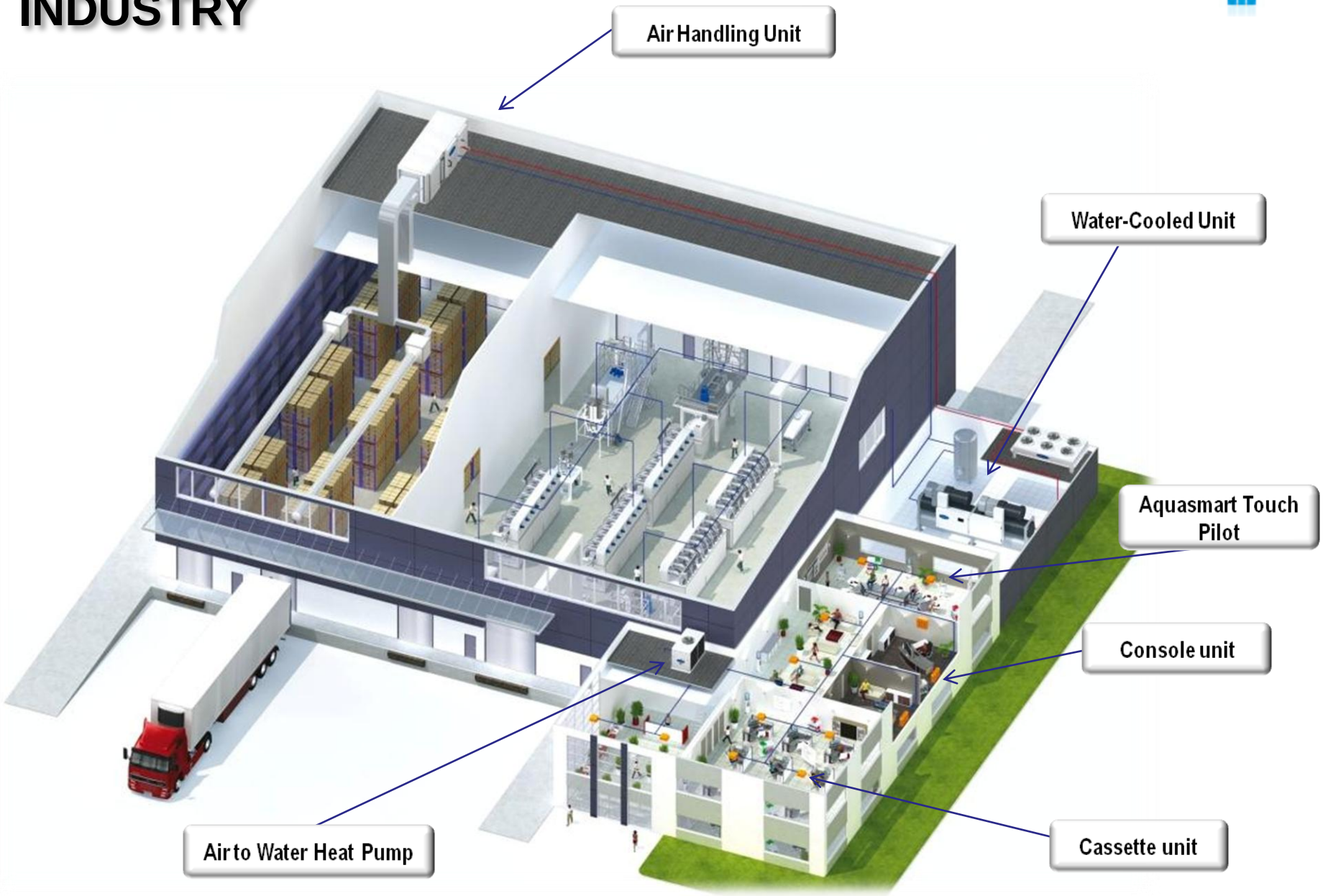
REMOTE CONTROL
- Customer contacts
  - Alert signal (service)
  - Alarm signal
  - Occupancy control (external clock)
  - Occupancy overide
  - BMS fire signal
  - High/low fan speed control
- RS485 port
  - CCN: Aquasmart System Manager
  - JBus gateway (option)
  - BACnet gateway (option)

EXTERNAL CONTROLS
- Hot & chilled water valves control (0-10V signal)
- Hot & chilled water pumps control (on/off)
- Cooling/heating production control (on/off)

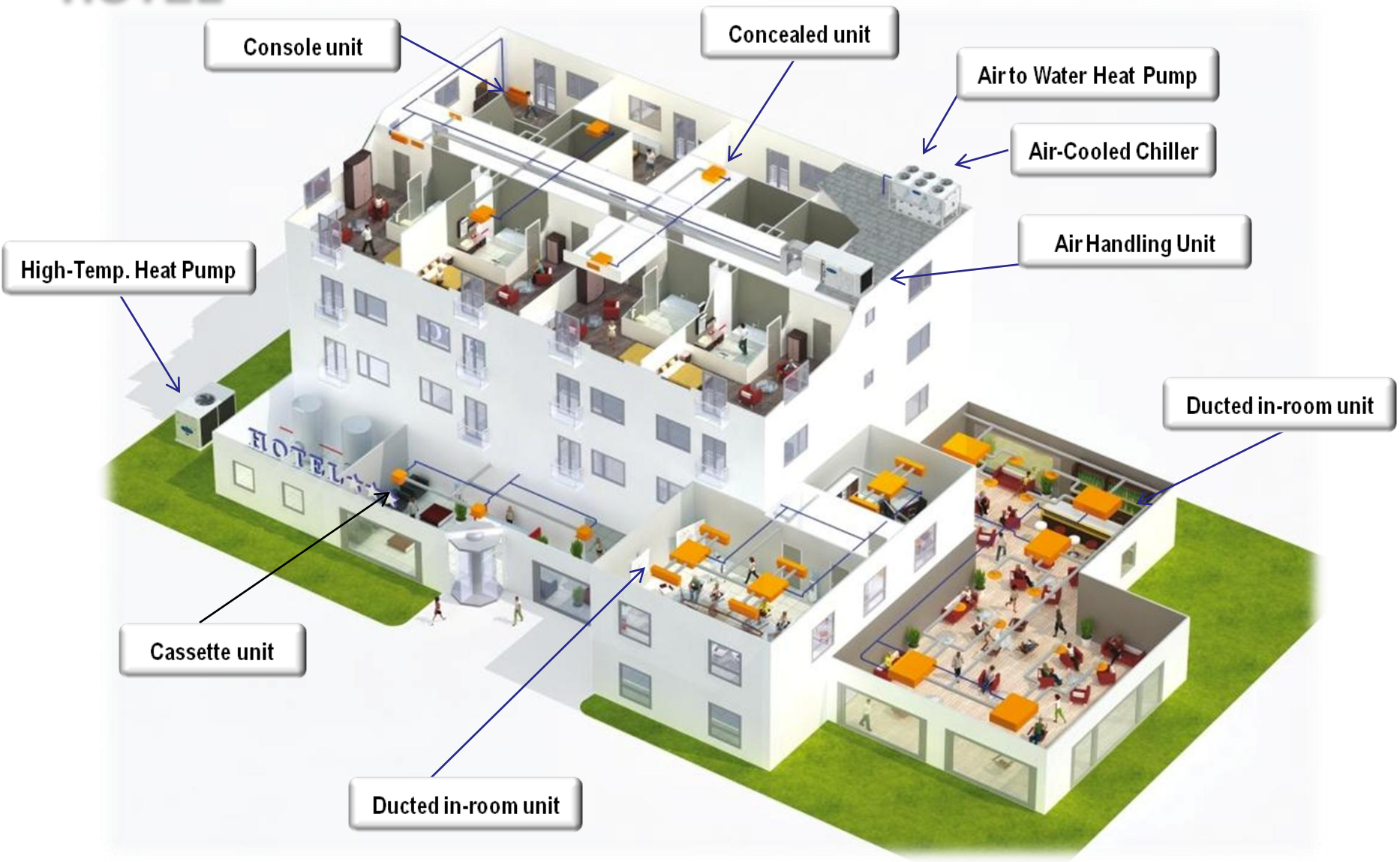
OFFICE


Console unit
Air Handling Unit
Ducted Corridor unit
Ducted in-room unit
Air to Water Heat Pump
Air-Cooled Chiller
Cassette unit
Cassette unit

INDUSTRY


Air Handling Unit
Water-Cooled Unit
Aquasmart Touch Pilot
Console unit
Cassette unit
Air to Water Heat Pump

HOTEL


Console unit
Concealed unit
Air to Water Heat Pump
Air-Cooled Chiller
Air Handling Unit
High-Temp. Heat Pump
Ducted in-room unit
Cassette unit
Ducted in-room unit

COMMERCIAL CENTRE